



Gendered Design in STEAM Bulletin |

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These interviews were collected as part of the research project 'Gendered Design in STEAM in Low and Middle Income Countries'. The project was cleared for ethics (protocol #115041) by Carleton University Research Ethics Board-B (CUREB-B) that is constituted and operates with the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2).



GENDERED
DESIGN IN
STEAM

ID37 - Exploring urban care infrastructures to support women's autonomy in Argentina

Interview transcript

Interviewee:

Ana Falú | Principal Investigator

Centro de Intercambio y Servicios Para el Cono Sur Argentina (CISCSA) – Ciudad Feminista

Interviewer:

Ona Bantjes-Rafols | GDS Research Assistant Coordinator

Carleton University

Date of interview:

3 November 2021

Transcribed by:

Vanan Online Services, Inc.

ID37 - Exploring urban care infrastructures to support women's autonomy in Argentina

Interviewer: Ona Bantjes-Rafols

Respondent: Prof. Emerita Ana Maria Falu

Interviewer: I am going to ask a few questions and we can stop whenever you want.

Respondent: Alright.

Interviewer: And I pause the recording whenever you want. But I want to start with a quite broad question. Could you explain the history of your project to me? You can take as much time as you want.

Respondent: Ok, our project has a background, alright? We have been working... I am a university professor but I am also an activist for women's rights, human rights, and I am directing an NGO in Córdoba, Argentina that is almost forty years old. And I would tell you that our first jobs were in the years... in the late eighties or mid-eighties. And since then we have been working on the right to housing for women, the right to the city, to public services, etcetera, etcetera. In other words, there is a history of production, reflection, political advocacy, especially with local governments. The project that summons us today and that we are doing with ADRSI, is a project that comes to be located in time and in our moment. Because we think, we began to think about care issues, the intersection with the territory and to work on it in 2016 and now, the Covid-19 pandemic has shown that it is one of the central issues that affect the life of women in the city. So, I think that it has a direct relationship with a process of knowledge elaboration that, well, that is it, there is no more to say than this which explains quite well why we are working on this issue and why we think that we must reflect on urban design, on the ways in which cities are thought; because in general this is absent in political decision-makers, in technical decision-makers, in the discipline of architecture in urban planning itself. There is an absence of the gender perspective, of the gaze that incorporates women in their needs. This possibly already corresponds to another topic, doesn't it? That has to do with what we are doing, which is related to gender omission in design, urban planning, politics, and why we are concerned about this issue.

Interviewer: And how did you come up with the idea for this particular Project? I do not know... how was...? How have your experiences influenced you?

Respondent: Well, in 2016 Eclac Cepal asked me for a preliminary exploratory study on territories and care issue in the city of Rosario, Argentina. This is published and this was the first... Of course, we were already concerned with the urban designing issue based on a particular vector as proximity. How we design thinking in terms of women, in terms of their daily lives. So we were already concerned about this. In 2016 I received this request from Eclac Cepal and I prepared a preliminary study of municipal policy in the city of Rosario and of the territoriality of care, linking some key indicators that cross, that make this intersection,

which is not the same as adding, but this intersection that puts different conditions of vulnerability or oppression at stake to account for the inequalities experienced by women. Why this? Well, this is also linked to the fact that one has been building a conception that will interrogate the androcentric gaze on architecture and urbanism, that gaze that can be exemplified quite well in the Modulor. It is the man who also has measurements, who raises his arm and touches two forty, when not even the average of French men had or responded to these measurements and dimensions. So, it is a universality measure of the architecture of urbanism based on a man who is not all men, Ona. He is a productive straight young white man who leaves a lot of men out and leaves all women out, alright? So diversity is a central concern in our discipline. The other central concern, which has to do with what feminist studies have been contributing to us, is related to the division of the public and private world, to the sexual division of labor, understood as roles that have to do with the biological nature of people, alright? And the use of time. I am taking three central themes that feminism contributes and that we incorporate into the reflection of the urban architecture discipline and we state that we cannot think about urban politics, urban design, architectural design, and housing in a neutral key. Neutrality does not exist, it does not exist, it is not real, okay? It is an omission, there is no neutrality. There is a denial of a whole set of people who have behaviors, needs, demands different from the universal view of the straight productive white young man. So there is a whole set there. And, on the other hand, stranded and located in Latin America, we say that the issue of inequality is a central issue on the urban planning and architecture agenda. And that we have to think about our discipline in the field of the needs that different people propound from the framework of the deep inequalities that the territory offers in terms of the quality of services, the types of services, and then, when they intersect again women, sexual division of labor, number of dependents in charge. You do not have to be a mother to have dependents, there are women who do not have children and have the right not to have them, but have dependents or mothers, or fathers, or aunts, or relatives about whom they are concerned and taking the care responsibility. So, saying that when they come together, all these dimensions intersect in the deficiencies, that is why we speak about territories. I think this is another conceptual approach that needs to be expressed, especially in English, because sometimes it is not comprehensible.

It is not only cities, it is territory because in our cities there is plenty territory without a city, I mean, without houses, dwellings, roofs without urban development, without services, without accessibility, without places of urban care facilities, etcetera, etcetera. So, here there is also a distinction that allows us to approach these urban infrastructures that are not distributed in the same way or with the same quality in the territory. So, we are interested in discriminations, exclusions, inequalities and how these are expressed in the daily life of women who have this assigned role of caregivers, almost solely responsible for the social reproduction of people's lives. This does have to do with the profession of architects and urban planners. Why does it have to do? Well, this is proven in many ways by many scholars, we are relying on studies by Dolores Hayden, Dorina [Unclear] and many others who have contributed and who have been contributing together with us Latin Americans. As I have mentioned, since the nineties, we have a series of publications that account for this issue. How to think about housing from a gender perspective, how to think about cities, how to

think about urban transport services. So how do these territories and these cities materialize? On the one hand, what are they like? How is the materiality of this city? What does it have? On the other hand, how are the planning and designing instruments? And how much do they incorporate this omitted perspective of women?

And also the elements that have to do with the symbolic world, those intangibles that often make, for example, the violence phenomenon experienced in our cities and that is mainly experienced by women and that are different from those that men experience. In women, this is random violence, which has nothing to do with whether women participate in criminal groups or not, as it generally happens with men, but has to do with the mere fact of being women. From being objectified bodies, bodies that can be abused, that can be raped, that can even be murdered, which is femicide. So, I want to tell you how that materiality of the city is conceived, those degrees of the symbolic, of the intangible within the city, it also has to do with how women live those cities, those neighborhoods. And the scales appear, it is not the same to talk about the city, to talk about the neighborhood, to talk about the house, or to talk about the women's body as another territory that is expressed when it is in transit, when it is on the move in those materialities of Latin American cities that are materialities of inequality, alright? I do not know if this makes sense to your question.

Interviewer: Yes, totally. Everything is super fascinating. Maybe you can talk a little bit more about the project's goal and perhaps what was the inspiration?

Respondent: Well, we are working in two neighborhoods in Córdoba, because we have chosen the scale of the neighborhood. We think that the scale of the neighborhood is the scale of everyday life. It is that transition from the private world to the public world, and without a doubt it seems to be, the most feminine scale, where women are developing their bonds and relationships. So, we are very interested in seeing what happens with care in these neighborhoods, crossing it with the economic, socioeconomic dimension. And the analysis taking the studies of, let us say, the care diamond proposed by Razavi, but fundamentally taking what the state, public and private policy offers. And so far we have found, let us say, quite eloquent results. Quite eloquent results about what this reality is, and how there is a class division, a social-economic inequality that will be reflected in territoriality and that will also be reflected in the material conditions of these urban care infrastructures. The first point is the location, where are they located in the territory? And we already have very interesting proofs that speak about how public care is scarce in the territories with the greatest poverty, in the fragments of the city with the greatest poverty. And what seems much more evident is the private proposal of the care offering that is going to be concentrated in the places of middle sectors, middle-high sectors and wealthy sectors. So, there is a need to rethink the urban, to rethink the city and its fragments, and to rethink the issue of care services. It is very interesting because in the process in which we are doing all this, in the pandemic, public policies appear, like the one in Bogotá that offers, let us say, so-called care blocks, or inter-ministerial care tables appear like those in Argentina. And we are being able in some way to contribute to these reflections in different regional, international, national and local spaces. The issue is a necessary issue because we are talking about something that challenges, that

questions urban planning, its approach, the needs and demands of this diversity of population that has not been cared for and that today is expressing itself as a need.

Interviewer: I want to ask about who is this project aiming for?

Respondent: This is a very interesting question. We believe that it is aimed at different actors. On the one hand, it is aimed at the urban planning architectural discipline itself, the training itself to demonstrate the importance of not omitting subjects in the diagnoses that are ultimately political diagnoses. It aims to the thinking of the discipline itself, how not to think about these supposed neutralities that only omit subjects for planning, for design. On the other hand, it also aims to the users themselves, because the pandemic has made us quite difficult to work in focus groups, but we have found methods to make up for the impossibility of getting together physically. This also strengthens the users themselves and makes them recognize their own role, their own use of space and time, and can allow them to locate their demands and strengthen their agendas on what we call the right to the city, the right to the neighborhood. On the other hand, to the local authorities, and to tell them, "This is happening, what do we do about this?" And in that sense we are interested in working with the media, campaigning, spreading our findings and our work on social media, because it is also a way of raising awareness about the importance of this issue in our discipline.

Interviewer: Thank you so much. Well, at the level of the disciplines that are part of this project, how do you understand the relationship between disciplines? And if this project in particular... If you think differently, let us say, the relationship between disciplines after this project?

Respondent: No, I think it is on the contrary. I believe this project reinforces the idea, right? Hopefully it has continuity and hopefully it finds a sensitive listening to the importance of working on these issues, to construct a convincing knowledge, to construct a knowledge for gender urbanism and planning thinking in terms of women and feminism, which really helps to understand the importance of this dimension in the discipline and in the action of the discipline. What is urban policy? What is architectural policy? So, hopefully this deepens in order to generate much more evidence, more awareness, more training, more campaign, which allows us to reach more public with these issues that are central issues to really advance in democratizing the discipline, I would tell you to change the episteme, right? Because it is a patriarchal episteme that must be rethought, that must be deconstructed and that must be fertilize with new knowledge. I would say: to construct convincing knowledge for gender, urban layouts for gender urbanism. (Laughs)

Interviewer: (Laughs)

Respondent: Speaking that way. But I think ... Not everything ... the other way around, I would tell you that we are more convinced than before about the need.

Interviewer: And speaking of architecture and urbanism as disciplines that are quite focused on this project. I am curious about whether there are others... If you have learned from other disciplines, or if there are other disciplines involved in the project as well.

Respondent: Yes, yes, yes, of course. And I tell you from now on that to work on all the maps and cartographies we have worked with cartographers, with social scientists, with methodologists. There is a methodologist in the group, in the team, Eva Colombo, who is permanently there working on adjusting all these issues. Also with feminist economists because now we want to incorporate, let us say, an economic valuation dimension. In the absence and presence of this, right? So, of course, there is also a disciplinary intersection that is not only resolved from the fields of architecture and urban planning, but it is also central to place it in the fields of architecture and urban planning.

Interviewer: And how have you maintained the gender approach throughout the project process?

Respondent: Well, this is inherent in our work. (Laughs) We have not had to keep it because it is part of our thinking, right? We are a team of feminist architects and methodologists and political scientists, and our approach to the issue comes from feminism. So, the gender perspective is something that is always present, always questioning what is being done.

Interviewer: And you were talking about the different types of inequalities in Latin America and in Argentina specifically, but perhaps there are others at the generational level...

Respondent: Sure, there are differences... there are economic inequalities, but there are also ethnic inequalities, there are racial inequalities, there are inequalities according to sexual identities, there is age inequality. It is very interesting to take this into account. How are we going to mark the territories? And how should we think about planning according to all this set of inequalities or differences, the multiple identities that people have and that women have in society? Migrant women, black women, indigenous women, lesbian women, trans women, young women, old women, childless women, etcetera, etcetera. So, each one of these groups and these identities deserves a look and deserves to know how to experience the territory, how to travel throughout the city. What care demands do you have, need, or propose? Etcetera, etcetera.

Interviewer: Lots of experiences, right?

Respondent: Yes, sure.

Interviewer: To keep in mind and think about it. I am curious whether this has entered, let us say, within the methodology, how to design the project to have these things...

Respondent: Yes, yes, yes, of course, we are even incorporating a sector that has a migrant population to be able to observe this and compare it. Yes, of course, it is very important. This makes the feminist view, the plural view of diversity that is what permeates our project.

Interviewer: Well, we have also talked a little bit about the pandemic, about the obstacles of the pandemic, but perhaps you can talk a little bit more about how you have overcome these obstacles.

Respondent: Well, look, as you can imagine, on the one hand, the pandemic has highlighted issues. It has highlighted the care issue. Another issue is the economic crisis because it is

women who are in informal jobs, right? The other major issue that has been highlighted is violence which has grown at least in Argentina, complaints to telephone lines have doubled, the number of women murdered in the first months of the pandemic has almost doubled, in other words, we are talking about quite difficult issues in women's lives that have been evidenced in a very critical way, particularly with the pandemic. This is the first thing. On the other hand, the difficulties of being able to work in the middle of the lockdown. We have had many months in Argentina of not being able to really work, so this has undoubtedly been a difficulty for us when it comes to the project, but we have been accommodating this with other mechanisms such as telephone interviews, focus or virtual groups, desk jobs. Well, we have supplemented that with other methodologies, we have even had a methodologist who advised us to see what the possibilities were to really adjust how we collected the evidence and how we worked from the conditions of the pandemic. That is all.

Interviewer: But, well, it has been quite different, let us say, from ... as you have been working on these issues for many years.

Respondent: Yes, yes, quite different, quite different. But, anyway, it is interesting to say how we find the ways to do something. There are always ways to be able to replace when you have difficulties like those that the pandemic has placed in our daily lives, the daily lives of the whole world have been changed, right? So people have been finding mechanisms to be able to work. Although it has taken us a longer time, it has set us back in some way, hasn't it? But also the laboratories that were made within the framework of the project have been an opportunity to review the methodologies, to review the approach of the projects. Do you know why the laboratories were quite important to make synthesis? They were important to make us realize where we were and how to move forward, to listen and learn from other experiences.

So, I believe that the pandemic confronted us to adjust participatory methodologies within the framework of Covid-19. And in that sense, I would tell you that the laboratories were moments that really helped us in the adjustment process to the situation and using the Miro platforms, using other tools, other instruments that allowed us that virtual participation. Those virtual participatory methodologies. I think that is interesting to say. And, of course, it has also allowed us to review our theoretical approach, to see how to work on the intersections of the territory, women, care, to go deeper in readings, in debates, in exchanges, participating in different spaces. So, I think that in that sense it has contributed quite well and it is a very interesting case study. I am convinced that it is a very good case study and we are very grateful for this opportunity, but we also believe that we are contributing in a solid way to these forms that are still exploratory and that would require many more resources to move forward. But this project, the laboratories that we have had and even the adjustment process itself in the context of the pandemic have allowed us some quite good learnings. Quite good learnings. That is all.

Interviewer: (Laughs) Well, since you have brought the issue of good labs within the program that we have talked about...

Respondent: All labs, all labs. Yes, all labs have been really useful moments, I did not participate in two of them because I had other commitments, but for the team they have been quite interesting moments of adjustment, learning, synthesis, and review.

Interviewer: Well, maybe we can talk about other parts of the program too, such as the interaction with the regional expert, with Raquel ...

Respondent: With Raquel? Raquel is adorable, she is a treasure. (Laughs) What can I tell you? She has been a tremendous support to us. Raquel is fantastic and the times we have done regional meetings; they have been useful too. Listening to the different approaches, some that seemed strange to us, and we didn't quite understand, but that later... yes, everything contributed, it was very interesting.

Interviewer: And has it been positive for you to have these projects grouped by region?

Respondent: I think it is interesting. I think it is interesting, because there are certainly points in common that allow an exchange. There is a language, Latin America has a more political language, it has a language where it articulates a lot with the theoretical knowledge, the development of disciplines with political action and I think it has a quite powerful feminism, a quite powerful feminist movement that places us in an interesting regional setting. Networks intervene, we participate in networks, I am the co-initiator of two quite powerful Latin American networks and these things are found within networks. So, they are interesting. I think that the regional dimension is very important and does not take away the international dimension, of course, but it is very interesting.

Interviewer: Have you been able to connect with other projects in the sector, sorry, in the region?

Respondent: Yes, we have connected with others, well, I have a connection with the person who is at the UBA, Griselda, we have connected with her. We would also like to connect more with a project in Brazil. We may do so. But we have connected with others, and Raquel has fostered it a lot in these meetings. There has been a connection because all the projects have been listened to.

Interviewer: But have you been able to connect with foreign countries, for example, projects from Africa, Asia?

Respondent: No, we have not done that. No. That would be interesting to see if there is a project that is taking similar issues to ours that allows us to compare. What happens is that within the team only two of us speak English and this is a problem in Latin America. But in our case, we have to find fluent English speaking people so it could be, I mean, a good possibility for open, a good possibility for exchange.

Interviewer: That could be?

Respondent: Yeah, definitely, yeah.

Interviewer: And how has the interaction with the expert sector been? What has worked?

Respondent: Are you referring to the University of Canada sector?

Interviewer: The... yes, it used to be [Unclear] and Keith Ibañez.

Respondent: Oh well, we have had meetings that have been helpful. They are always useful. Exchanges are always useful. I could not tell you that we ever had a meeting or an exchange and we said, "What is this for?" No. They are always useful. Sometimes more, sometimes less. Sometimes, let us say, they respond to cultural structures, so there are more difficulties in a dialogue. But they always contribute, they are always good.

Interviewer: And I want to ask about the newsletter that we have created and that we are sending out these days...

Respondent: Uh-huh.

Interviewer: Whether it has been useful in any way or not...

Respondent: I did not take a look at it, I confess.

Interviewer: No problem. (Laughs)

Respondent: I'm going to look at it and then I can give you my opinion.

Interviewer: (Laughs)

Respondent: I have not been able to do it because I am traveling and I have not been able to look at it, but I am going to look at it and I am going to give you my opinion.

Interviewer: There is no problem. It is also totally legitimate. (Laughs)

Respondent: Sure, sometimes we cannot do things, right?

Interviewer: Yes.

Respondent: But, I am going to check that newsletter that you guys are doing to see if we can contribute.

Interviewer: Alright. (Laughs)

Respondent: What I would like to do is to be able to contribute to the newsletter. Contributing with our case study, with some of our cartographies, propose why this approach is so important for urban design. Why we have to engender urbanism.

Interviewer: Mm-hm.

Respondent: Engender architecture.

Interviewer: I think that the exhibition will also be a good opportunity...

Respondent: Undoubtely, yes, yes, yes. We are working on an article for this as well. And I would also like to know if maybe at some point we could talk to see how to contribute to both the newsletter and the exhibition in a better way.

Interviewer: Perfect.

Respondent: Yes.

Interviewer: We will talk more about this later.

Respondent: Oh okay, dear, thank you so much.

Interviewer: I have some questions for the future.

Respondent: For the future?

Interviewer: For the future.

Respondent: Oh. I am telling you right now. We want ADRSI to keep contributing. We want ADRSI to continue what it has already invested in, because it is giving good results. We do not want it to make an investment and then stop it. It should give continuity because these processes demand time, it is not within a year or two that this is done. This takes time. So ADRSI has to continue, it must assume the part of responsibility that corresponds to the agency and hopefully it will double the resources because they have been quite small. Fortunately, we do not charge fees because our work pays us, but we would need more resources to do much more in-depth work with surveys, interviews. So, of course, undoubtedly for the future. (Laughs)

Interviewer: (Laughs)

Respondent: I answered that very quickly. (Laughs)

Interviewer: And how do you think your project will evolve in the future?

Respondent: I think quite well because it is already having a lot of demand, it is even already having the interest of other donors, which is quite important. And I believe that it will evolve quite well, it will grow, we need to work on it within more territories that allow us to have a much more evidence base to be able to work this within the discipline. Yes, definitely. For example, we are working with new dimensions now. How to measure the vulnerability of the territories, not just the lack and omission of gender? All this demands an elaboration and an evidence that must be worked in territories to really prove it. Hopefully we have the resources to do it. Hopefully.

Interviewer: Well, perhaps we could talk a little bit about dreams for the future. Let us say, anything is possible...

Respondent: Dreams for the future? It would be great if I am participating in the Global Care Alliance. It would be fantastic if within that Global Care Alliance, we have the possibility of having an even more consistent participation because we have the resources to do so. Canada should commit itself to the Alliance and also not only to the countries, but to the Academy, and the organizations because we are the ones that push the agenda forward. We are the ones who push the agenda forward. There has to be a commitment to those who

push the agenda forward, and guarantee and monitor these issues. A phone is ringing; I don't know where... (Laughs). Well, that is all, Ona. I do not know if you have another question.

Interviewer: No, we are done. If there is something we have not talked about...

Respondent: We talk again. I wrote my phone number there for you to message through WhatsApp.

Interviewer: Yes, thank you.

Respondent: Talk to you later. If you want to expand something, if you want... I will love it.

Interviewer: Or if you also have something you would like to add.

Respondent: If I think about something else, I tell you. Alright?

Interviewer: Perfect. Thank you.

Respondent: But I enjoyed meeting you, Ona.

Interviewer: Likewise, thank you.

Respondent: Nice to meet you.

Interviewer: I am going to stop the recording for a moment.

Respondent: Alright.



GENDERED
DESIGN IN
STEAM

ID88 - Technologies for another form of construction: experiences by women from popular movements in Brazil

Interview transcript

Interviewee:

Diana Helene Ramos | Principal Investigator

Universidade Federal de Alagoas (FAU/UFAL)

Interviewer:

Chiara Del Gaudio | GDS Investigator

Carleton University

Date of interview:

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Transcribed by:

Independent contractor

ID88 - Technologies for another form of construction: experiences by women from popular movements in Brazil

Recording time: 00:51:22

Interviewer: **Chiara Del Gaudio**

Interviewee: **Diana Helene Ramos**

Interviewer: So, the first thing I wanted to ask you is the main thing. Could you tell me a little about the history of your project, starting from wherever you want, thinking about whatever you want, simply about the nature of your project.

Interviewee: Ok then. Well, I think that the history of my project originates from a profile of working with housing movements and taking very strong notice of this gender issue, you know. In Brazil, there are some building programs for social housing, for the housing movement, often carried out with an architect providing expert assistance, and the people who generally occupied the area, they were squatter areas, and demanded that it be turned into, become an area of low-income housing. So, in addition to a participatory project with these groups, it was later built using the method called, including an indigenous word from the Brazilian Tupi-Guarani language meaning community effort, which is a thing of building together, having it built together. They build the house themselves, draw up the plans, build the house, everything technically assisted by the architects. This over time became a public policy, a demand by the social movements themselves together with these architects who do this militant work. And we saw that most of them were women, and what was very interesting was that this transformed the construction site, because the construction site, which is an extremely masculine place, in this specific case, as most people were women, reaching 80%, something like that, we never quantified it, but it is a visually clear thing like that. You look and the majority are women, and then we saw with this, with this experience we saw how much women transformed this space and this building technology and the actual organization of the construction site. So, it was something that was very latent. It's not that I saw it, there are even texts by men who work with collective efforts talking about it, so powerful that the female presence is in collective efforts related to the housing movement. And then I, along with Caia, Caia Lazarini, who is from our team, she works in an office, I'm more in the academic part, but Caia works in an office that provides expert advice, housing movement. We've worked together in several other projects, and we wrote an article together, not an article, an oral communication, for a congress for Canada including, because I did my post-doctoral program in Canada, and then we presented it. And, based on that, we started to try to develop more of this connection between what she saw there in her practice, and academic theoretical vision about it, and so forth. So, when the program came out, the call for projects from... We saw that the GDS call for projects was released, we were really interested, technology and gender, and then another person who also works with collective efforts. Then I worked with her on an informal settlement in Rio de Janeiro, an informal settlement that was also building, starting to build the houses that they had obtained through the Minha Casa, Minha Vida [My Home, My Life] Program, a participatory project. A collective effort was going to be put together and also women. And there is Amanda, Amanda is a friend of mine who also became my master's program advisee with this research, investigating the role of women in collective efforts.

She turned to me and said, let's do a project about the construction site, let's write a project, and then we said, hey, but I wonder if it will fit the bill, you know, because we had this doubt. I wonder whether thinking about a construction site fits the proposal, because there was this thing about the prototype that you proposed. So, we said goodness, but what are we going to say about tools, tools that they create, because sometimes that happens, an adaptation of tools, things that are lighter to carry, which actually help not only women's work, but anyone's work, right, because chauvinism makes men think they have to carry heavier things, straining themselves, straining their own bodies. We heard it on the construction site several times. It changed the way of exerting a lot of force. And then the men said wow, I've stopped having back pain like I used to, like that, you know. So, we thought, I wonder whether it is going to be tools, or else the building block itself, which is lighter. We had doubts about how to do it, and we kind of discovered it in the writing process itself, you know, because the project had two phases. If I remember correctly, we sent something that was kind of open, then you asked for something more structured, and we started to put it together and in the end what we set out as a prototype is a manual, actually a manual that will, because there are so many things that are produced. And we were like, as we had these three different sites that we chose to be the objects of field analysis, which we thought would be fruitful too, because we could take completely different experiences, and see what they had in common, or that complemented each other in some way, and in the end we also chose, because of the context of the Coronavirus, so we thought that this manual thing could be interesting, but basically a manual can be considered a technology, but we will be systematizing different technologies in the manual. So, in the end, we even adapted, we were in doubt about whether it would fit the bill in the end, and it was nice because the GDS supported this proposal, which I don't know if at first it was exactly within scope, you know. And it happened like that, and then we got together a team. We thought it was funny that they said, oh, it has to be only women, the more women the better, and we only had women, you know. And then we started bringing together people who we knew who worked with technology and gender. So, there is Bruna, who in Brazil is one of the main ones, she is an engineer who is one of the main feminist theorists in the field of engineering, which is not a very common thing, not only in Brazil, but all over the world, Bruna who is a professor... So, we gathered people from other places. So, I am a professor at UFAL [Federal University of Alagoas]. There is Bruna who is a professor at UNIFESP [Federal University of São Paulo]. Caia is doing a PhD at USP [University of São Paulo], Caia who I mentioned at the beginning. Amanda is doing it, my advisee, but I'm a visiting professor and her adviser at UFRJ [Federal University of Rio de Janeiro]. So, in the end we brought together several universities in Brazil, you know, and there at UFAL the team is bigger, because that's where the project is based, where I'm an official professor, and then there are another two professors from UFAL, another three, who are Flávia, who is another architect who also works with various housing movements there. She is the coordinator of the model office, I am too with her, which is the model office that works with our field there, this being the colony of fishermen and fisherwomen. There is Eva. Eva is the coordinator of the design course. So, Eva will help mainly in the part of overseeing the participatory design of the manual, Professor Eva, coordinator of the design course. And, there's one more engineering professor from UFAL. So, it was cool that we managed to combine architecture, engineering and design, which says everything about this specific project. She is a professor of civil engineering. So, we, Jessica, to think about this thing too of the construction site, which I think brings together

a little of these three fields, architecture, civil engineering and design, which I think was also relevant as design in the sense of being more connected also with the proposal of the GDS. In fact, we are all mutual friends, you know, we have worked with different things in life. In fact, they are all my friends, many of them have not met. Now, we... we all know each other, and then we brought together this group, and it has been a pleasure, you know, because it's a reason for us to see each other, to meet. They are all women who I adore and I admire. So, it has been really cool, it has been very pleasurable [Laughter].

Interviewer: You mentioned a few things, one is the issue of... I think, of how it started, as you were already involved with these movements, and now the issue of friendship with people. What is the relationship of this project with your personal life, and with your professional life? Could you tell me, tell me a little about it? You might not know, know for sure, but you can, ok, sorry.

Interviewee: So, my personal life, as I said, has been very pleasant because they are my friends. Caia is one of my best friends, you know, so being able to have a wonderful project with her, Amanda, who is my master's program advisee, but she's my friend, so there's a close personal relationship. I think it has to do with feminist technology, you know. When we're talking about feminist technology, we're talking about affection, right, and I think this shows too, that our feminist technology is made up of friends. Ok, I'll tell you a story that happened Chiara just so you can feel this atmosphere. You remember that we were having a problem receiving the money, right, we had a problem receiving the money. So, there was that mix-up, how is it done. We had already done the selection of grant recipients. There was no way to pay the grant recipients, that mix-up, and we didn't know what else to do, because it was a bureaucratic issue. Then one day at the meeting, in the midst of the Coronavirus, everyone overwhelmed with personal problems, then one day at the meeting, no one managed to meet, everyone was sad. One cried because something personal happened in her life that was very serious, her father died from corona, these things that we were experiencing at that moment, and then we decided talk. No, let's not have a meeting, let's have a... Let's set alight the things that are cluttering our lives, then each one made a little fire, on Zoom ok, a bonfire, with candles, and so forth, and we wrote on paper what was cluttering our lives and burned it. And one of the things we put in was, unlocking the money that was sitting in Canada [Laughter]. And look, two weeks later it worked [Laughter]. This story is the best, we even have a photo. I can send it to you if you want, we took a photo of us burning [Laughter]. So, I think there's this, there's a really sentimental personal connection. It even turned into a methodological thing, because we have this intimacy to be able to say no, there's not going to be a meeting, we're going to cry, today we're going to burn things, you know? Because I think it has to do with that, we have a lot, a really intimate relationship. So, I think this also makes it possible to think differently about solving some problems [Laughter]. Now another thing you asked me, what was it? In the personal field, I think that's it...

Interviewer: Professional, professional.

Interviewee: Professional. So, the professional side for me is also a great accomplishment because I started my career working with the housing movement. I didn't work with gender yet. So, I worked with the housing movement for a long time

while an undergraduate already, and then later in the PhD program because my experience with social movements started with the housing movement. However, in order for us to be able to support ourselves, you are not always able to continue in a certain field, but I managed to at least continue working in a field, like, that thinks a little about social transformation, because I got a job in fair trade. We had a lot of public funding in Brazil at the time. Nowadays there is not even a fair-trade secretariat anymore, but at the time we had one, so I could be paid to work with cooperatives. That's when I met, in fact, for example, Bruna, the one I mentioned who works with engineering, and then I left housing for a while and shifted to cooperativism, to economics. Then I ended up discovering a group, one of the groups was a group of prostitutes. And, then I started working with prostitutes. It like blew my mind. Then I started working with gender, because there was no way to talk about prostitution without talking about gender. And then my PhD was about that, so I left for the housing movement, I shifted to gender, but more to the prostitute movement, of course, always working, you know, with this social organization of the marginalized, let's say. And then, in my post-doctorate program that I did in Canada, I wanted to combine the two, gender and housing, and then I studied some movements there that work on housing [...] that existed in Canada. I participated in some events, including one of cooperatives that discussed housing for women and such, and it was in this context that we thought of this article, Caia, who I mentioned before, and I. This article, no, it was not an article, it was an oral communication. And then I started shifting towards that side, so drafting this project for me is being in this field, you know. Logically, it is focused on something more than design, which is not so much my area, my area being urban. I work more on urban issues, urban and regional planning, which was my PhD [topic], but as architecture always brings these things together, and that's why we set up this team too, which has design professors who are together with us on it, and architects who actually work with participatory design like Caia, right, participatory architectural design. So, for me, it was a path that was kind of natural, not natural, but that brought together, that the PhD, the post-doctorate program had already brought together. And then now with this project, I'm managing, now that I'm a tenured professor there, to work with these two topics that I love, you know. So, for me it has been, a path is falling into place, personally speaking, that is very personal, you know. Then if you take each one of the team, each one has a story, right.

Interviewer: You mentioned that the project, in fact, we wanted at least I think 50% women, you know, you said that there were only women. What do you mean, how can it be that way?

Interviewee: Ah, when we started to pick the team, it was not difficult. It was not something that we forced, you know. Actually, at the beginning, we had called a professor of design who worked with issues, it would have been pretty cool if he had continued because he worked with occupational ergonomics, occupational ergonomics at work. It would have been very cool for us. He even helped us think about the equipment that is, that we asked for funding for. Now I can't remember the names, because it's not my area, but a thing to measure body heat, to see, a lot of effort when doing an activity. He worked for a long time on it, creating equipment that helped the work of people who the market usually doesn't reach, for example, people who sort that shellfish there in Maceió that they call "Sururu". So, they have tools that they create and he helped to improve these tools, which is something that the market does not reach, so

there is no design, hegemonic design. And, so, he was already working on that. He helped us at the beginning of the project, but he left UFAL. He went to another university where his wife lives, he left, and then at the end he left the project, and we ended up only with women, but, well, we put him in because of this ergonomics issue. The others all had to do with the path of working with gender. And then, luckily, we had a very complete team, I think, who all worked with gender. They were women, right. This ergonomics issue, in that in the end he left, we lost this ergonomics issue, but that's it. There are other professors who work on it, but they are not on the team, but if we so require, so much so that we kept this equipment in the purchase order for us to carry out this analysis of the work at the construction site. So, that's it, it was kind of natural, you know, that men are not interested in studying gender, right, which is kind of naive on their part, as they don't realize how they themselves suffer, as I told the story of the construction site workers who realized that their work would be much better if they didn't keep trying to push a certain idea of masculinity [Laughter], anyway, but I think it has to do with that too. And luckily, we also managed to put together a team who all study gender and cover the topics I think are necessary to do with the work.

Interviewer: You said that you also have three construction sites in your project. Would you like to talk a little about that, perhaps reflect a little on the relationship between the projects, the people who, or the place, or the people who take part in these construction sites or these, what have you been observing along this path?

Interviewee: So, the construction sites, you know, the spaces that we will work on in the field, they emerged from the work of the team. So, as the people, as I told you, are from different places, this also resulted in construction sites in different places. At first, we were like, hey guys, how are we going to organize it, but in the end, we saw that this was enormously rich. So, Amanda, who is my master's program advisee, works at a construction site in Serra da Misericórdia, which is an informal neighbourhood, a favela in Rio de Janeiro, Serra da Misericórdia, where a group of women started to organize themselves during the pandemic. In the beginning, it was even a camp in Rio, but anyway, we changed because they started to organize themselves, because it used to be that informal settlement that I told you that I also worked at, and then later she started working with this group of women that was formed during the pandemic. Several were fired, I don't know if you know in Brazil, but in Brazil the labour market, the share of women in the labour market has dropped to the equivalent of thirty years ago, after the pandemic. In other words, the ones who were fired were women. Our share, the share of women fell, to what it was in 1990. That's Brazil. I can send it to you later if you want, the data on the situation. I wrote a text, an article about gender, housing and pandemic, during the pandemic and I have this data there, because that's the situation. So, then these women got together. Most of them went through that, they lost their jobs and started to organize some things in the community, for example, also day care, because in Brazil that's the situation. They closed day care centres, so sorry, and in Brazil day care centre mainly for favelas or popular places, they're like that, five meals are served at the day care centre, then the child suddenly doesn't have five meals anymore. The mother doesn't have someone else to take care of the child, so they organized a day care centre. Therefore, they started to build, so we thought it would be really cool to change the field, so we moved to Serra da Misericórdia in Rio. So, Amanda's master's degree, that's the master's degree. So, in fact, this project helped both to bring together

different sets of research that these friends of mine were doing, as well as in some way to assist a little because Amanda doesn't have a grant, and now she is one of the grant recipients of the project, for example. So, it's a much smaller grant than the master's degree grant was in Brazil, that we got, because the project isn't that much money, but it's a help, for those who didn't have anything, it's a help, so, you know. And, also of help, for example, are the daily allowances, field visits. All of this will be in the scope of the project. So, it is also a way to fund projects that were happening with blood, sweat and tears, you know, with blood, sweat and tears, we say that, without any help, you know, without any funding, as you know the situation of scientific research in Brazil. And Caia, Caia actually, her PhD is another matter, and about property. It has to do with it, but it's about property. It's just that she's been working with this group in the maroon settlement there in Maranhão for some time now, and it's a job which also has no funding, because not only did it bring to an end the funding for fair trade, academic research, it also brought to an end a lot of funding for social construction that we had before. So, we don't have it either, so it was a form of expert assistance, for example. It was a way for her to be able to do this project that she was already doing there, just that she also did it without receiving anything, getting help here and there, and it is a way for her to be able to be closer. So, for example, she's now going to Maranhão on Monday, to do, already start to do the project. There is a bakery that they are setting up for the maroon settlement, and she's going there. The ticket is in the scope of the project, it is being paid by GDS for her to go. So, how would she do it, she would pay out of pocket or arrange other financing, some social movement would pay. As a matter of fact, yes, in Brazil to get things done, you end up begging. So that's it. She's making sure she can do the work she was already doing there, right, and it's going to help us think about construction, different site, different constructions, very different places. I think in the end that was super enriching, because it's a maroon settlement in Maranhão, which is in the northeast, but it's almost north of Brazil. It's not like that, culturally it's sometimes more north than northeast, despite being regionally in the northeast, Maranhão is. Then there's Amanda's project in Rio, in a ghetto, and at UFAL we have the model office, as I was telling you before, which Flávia and I run, and which is a model office. It is a type of university project for an architecture and urbanism course. I don't know if you know about them, but they are quite common, and we work with a colony of fishermen and fisherwomen, where first we did the plans for colony of fishermen and fisherwomen, which are all going to be made of wood and bamboo. It was also done in a participatory way. And now also joining, who we added to the new project, are the shellfish gatherers, who have this gender division; women usually stay with the shellfish and men are the ones who go out. It's not that quiet, but anyway, to the high seas to fish, and they stay more with the shellfish, which is something closer to home. It has everything to do with gender too. To take care of the children, you can't keep going out to sea so easily like men, anyway. And then the women want to organize their base separately. So, in the end, these are things that are modified throughout the project, but it is the same place as the colony. It is not Maceió, it is a nearby city, which is Porto de Pedras, an idyllic, beautiful place. It is a colony, a small fishing town on the edge of the sea, and then we joined the three together. We already worked with the model office there, and that's it. The office also doesn't have any funding, and then we won it. Us professors, we don't earn anything. So, we continued our normal work, just that as a result we can make it possible, for example, to visit, right, and we also got a scholarship student, for scientific initiation, who's going to do, she's going to be working, and she's from the model office. So, the model office, which at the same

time didn't have, didn't receive anything, one of the students, we have ten students, but that's ok, one of them will have a grant for eight months to be there helping us on the project. And she joined now. It's as I told you, we weren't managing to put her on the team. Now she's on the team, it's really cool, and she also has a nice interconnection with design too, she's an illustrator. So, it will be very cool to make the manual, that's why we chose her too. I don't know if I answered, but the countryside has that, right, so the countryside has a maroon settlement, right, so this related issue is a tradition of Afro-descendants, right, in a kind of rural area, practically rural, with a very specific culture, you know, as to everyday life. We have women there in the resistance in a favela in Rio, in an urban area, despite the place being peripheral, which is quite characteristic, not yet squatted, let's say almost rural, but it is much more urban than the other two, and then we have this fishing village, you know, and fisherwomen which is a more beachy context, a relationship with the land, with water and land, you know, so, you know, it's really...

Interviewer: And how you were working on or have been working on the share of these women in the project, in the field, I don't know whether also because of Covid and these things, and I also wonder whether things have changed from before the project to now.

Interviewee: In our original project, we had a lot of tickets, because our idea was to go to every place, for them to go, for us to go, as the GDS also was, for everyone to go to Canada. So, the idea was that, which we therefore had to adapt, because we wouldn't be able to make these trips anymore because of the Coronavirus context. It's sad, right, because it would be very cool, and we are doing it online, but online there is that difficulty in Brazil. Low-income groups like this don't have the internet, they don't. It's very difficult in that way. We're not managing to do something for them all to take part. And so, we did this, we added a grant to the project, a grant for each of the territories. There is at least one person who will receive money to be able to dedicate themselves more fully to the connection with us to be able to go to meetings, because that's the situation too, right. Everyone really has huge income problems, so, well, you telling them to go to a meeting is work, right, so, because they will forsake doing something else to do that, we therefore got this grant. It was really difficult to pay too because the university doesn't give money to anyone who is not an academic. In the end we turned it into a daily rate. It's something we'll have to justify there later, because the only way to manage to pay them was as a daily rate, and then they, they have to go to meetings, you know? And we also bought a memory chip, internet stuff for the cell phone for them to get. So, that changed, we added, we didn't have it before. So, that ton of stuff in the form of tickets that we had, we had to adapt to allocate a little, at least one person there with a monthly income, and those little pieces of equipment for them to be able to participate in the meetings. And, so, we then came up with some activities in the territory that will be done, for example, by Amanda in Rio, by Caia in Maranhão, and by the model office, which the grant recipient, Flávia, will do there in Porto de Pedras. This is an across-the-board activity, which we thought up at this stage we are at now, for example, the diagnosis. It will be a workshop that we came up with, and it will be the same workshop. So, we will get this synthesis of each one of them to try to put together an organization applying across the board. And this will be done too, demonstrated to them in a meeting involving the three of them, they will attend, and it's really cool, because then they will meet each other. We found out that one of them knew the other, from another, because social movements are also this thing, really articulated in a network. So, they knew each other.

One of them, one from Maranhão knew one from Rio, from another event. So, it's been really cool because we really wanted this, for them to exchange things like that with each other too, to be able to make these connections possible, right, also between different social movements. So, it would be much nicer if we could go, but it's also happening like this, and that's it, our field has shrunk much more in person, right.

Interviewer: You mentioned before, for example, the issue of the professor, who is no longer there, because in general men are not interested, but also examples of men on the construction sites wanting to stop, because the presence of women brought a lot of energy, but also it allowed them to be, I don't know, not as macho as they normally are [Laughter], that was good for them. So, I was wondering how you guys tried to address this issue of gender inclusion, whether you did that. Were there different perspectives, also reflections on these issues in the projects? Was anything done or not too, because you mentioned women and everything, but I wonder if we also had men, or also people with other gender identities? Did you reflect a bit on this? Did you include, I don't know, people of different classes, I don't know, those sorts of issues?

Interviewee: We, including the setup of the workshop that will be next Monday, I even told you that she is going to Maranhão. For the workshop we thought about that, because in the groups, as I said, most are women, but not just women. So, since we, because our workshops are focused on thinking about technology and gender, so how do you include men, you know, in the workshop? So, we even thought about that in the last meeting, how to think of a methodology that is not really just for women, for the group to think about gender issues. So, it was something that we thought, we have a group that is only made up of women, which is the women from Serra da Misericórdia. So, we also had to adapt, because there is that situation. This group is only made up of women, but the group from the maroon settlement and the colony has women and men. So, we created a methodology to be able to discuss this issue even more about the sexual division of labour and roles and each one and so forth. So, it's something that we think about, you know, because, that's the situation, as I mentioned before, it's also important for men to see that this problem doesn't just affect women. It's a structural problem. So, it's in everything, so it relates to how men are constituted, it relates to how work is organized. So, it's something that we thought about, you know. I'm giving an example from the last workshop, but for sure.

Interviewer: If we think a little about design, you mentioned before the issue that there are three subjects actually converging, which are fundamental, civil engineering, architecture and design. So, I was wondering, for example, what was the relevance of these circumstances and also of this kind of project you are doing for the design subject, and for design processes, and maybe whether some understandings about design as well, or these processes have changed throughout the research up to now? Of course, afterwards formally things will change.

Interviewee: Ah, great question, because this is how we see it all the time. I didn't know there was participatory design, for example, so Eva brought this to us. We had a reading group, so for example, Eva brought the text to it. I won't remember his name, but I can send it to you later, it's in our report, everything we read, but she brought it. What his name is, I can't remember, I didn't know about him, so she brought participation in design for us to read. And, we, for example, we put forward the issue of participatory design on

the construction site, also to discuss, and then those conversations always happen. So, Eva was the one who presented design. She said wow, I never imagined that, and we said, wow, I didn't know, you know, it was like that. So, it's been really cool because we think that the subjects are close, civil engineering and architecture, design and architecture. Then when you look, you don't know the literature, and they converge. They all fit well together and we didn't know it. She didn't know it and we didn't either, so it's been really cool. All the time, we learn from each other, you know, and even though, just imagine, we used to work together, we're friends, but even so, I think that's the case because at university everyone is in their own little box. A lot of things that we had never read, and in the same way I was like, wow, but have you never read that Eva? She didn't, I didn't even know it existed. She also must have been when she discovered the male author or female author so-and-so. So, it's been really cool, for us to learn from each other. They really are subjects that seem really close, but there's still a lot of separation, you know, and that's all the time, right? Go ahead, you can speak.

Interviewer: Your, sorry, I can't remember. You are originally an architect, designer?

Interviewee: I'm an architect, I'm an architect.

Interviewer: OK, perfect.

Interviewee: I'm an architect and I'm more drawn by the field, because in Brazil the bachelor's degree is in architecture and urbanism. I don't remember in Canada what it's like, but several, in Europe it's separate. You have an architect and you have an urban planner, but in Brazil they're together. I'm more from the urban planning area, but I also worked a lot with the housing movement, but, well, this context of the right to housing with a project...

Interviewer: And what potential do you think that, for example, design can have for urbanism? Has it changed or I don't know, has there been an understanding of it, if any, maybe there hasn't been any?

Interviewee: No, I think there is, of course there is, I just can't say now, but of course there is, because that's why we see these connections all the time, for sure.

Interviewer: If you remember and want to share with us later, go ahead.

Interviewee: Yes, fine, that would be cool Chiara.

Interviewer: Let's pause on an issue here. OK. I was thinking about two more questions, we have a few minutes. One is, what is the place maybe of doing actually in this project, do you have any relevance, do you have, this issue, or maybe it's too early to think about it, because of the workshops, also for the understandings, due to the changes you want to make.

Interviewee: I think, I don't know if I'm going to answer, but I think the relevance at first that I can already see even without it being ready, but I agree that this will be too, since it's participatory, we'll also see what will emerge, but we... From my experience, from the little that we have seen, I think that we can systematize knowledge that is developed in communities, right. Knowledge, first that is popular knowledge, often systematized, even worse because it is knowledge held by women, held by women and often black, because

most of the women we work with are black. We took a picture, you'll see. I don't think there's one white woman. Only the people on the team are white, so it's a knowledge that it is very disregarded, very invisible, a lot not seen as relevant. So, how can we take this knowledge to combine it with things that we can contribute as an architect, engineer, designer, and systematize it, for it to be reproducible, right? So, that's the idea of our project, and this is the relevance of taking knowledge that often ends up being destroyed because, you know, with the hegemony of capitalism, globalization. So, taking this knowledge that is being developed and trying to make a synthesis of it for it to be reproduced by others, our idea is that, for it to be, to become a manual that can be used at other construction sites, and so that this idea can be improved later too. If you already have something more elaborate, you can do something even better based on it, right, at another construction site with another reality, with other women. I don't know if I answered you, but I think that the greatest relevance I see is that.

Interviewer: Maybe my question is what are your dreams for the future after the project?

Interviewee: Ah, dreams for the future.

Interviewer: I don't know, you said, the idea also for this manual [...] was there, but I wonder whether you guys are already thinking about or if you have any ideas, or whether you have any knowledge, desire, dream, something like that.

Interviewee: Look, I think that if we, our dream, even if we could actually build something, for example, which I think is something that can come after the manual, because the manual is a synthesis. Maybe we can, after the manual, actually make, for example, a tool or a building module that actually brings together several things that these fields contribute, because a lot of things are not just easier to build, less heavy, but less aggressive to the environment. We see the thing specific to, the way of building, right, by women, or that there will be children together playing, that is not dangerous, that is not polluting. So, it is this kind of thing that I think we dreamed when we drafted the project, and then when it was time to assemble we saw that there was not going to be time, because it is something that is not so easy. So, we thought that, maybe to make the manual, but our dream was really actually to be able to design a part, a tool, something that actually made it reproducible in that sense. So, that was a dream, well, for us to continue in this sense, well, I think it is. All of us, when we drafted it, we were very keen to do that, but time is very short and it's something not so synthesized. It needs a little more synthesizing to get to the...

Interviewer: In the course of research, we always think big, then do a little, then do it, but then I always do that.

Interviewee: But the dream is still there, right?

Interviewer: The dream is still there. The last few questions, thinking a little about the program, the meetings maybe with Raquel, with people or Latin America meetings, or the more general ones, or communications, is there something about the program that has, I don't know, stayed, influenced either positively or negatively? Has something been taken away, that has stayed with you, I don't know, is there anything about that, from the program itself, from GDS? I was wondering.

Interviewee: We had a lot of expectations. When we went to the meetings, including the face-to-face effort thing, right, I think we missed out a lot due to being online and we had this desire to talk to people from other countries and sometimes, it's not that there was no space, but that's it, there's no coffee, right, there's no, I don't know, coffee break, right, where you meet people. So, well, this online stuff seems to dissipate things. There you are, but you end up not... I remember several, like, having thought, wow, I'm going to get the contact details of this girl from Africa because it has everything to do with our project, then I forgot. And there's this thing, it's very fleeting. So, so there's a disappointment in that sense I think, but I think everyone, you too, the difficulty of this exchange, well, because we saw it. And so, Raquel, for example, she created a WhatsApp group for Brazilians and one for Latin America, but we couldn't achieve much exchange. We achieved a lot of exchange at the time regarding how we managed to have the money get here, but we weren't able to achieve much change, you know, but, well, a few things we observed from some projects were useful to us. The Miro tool specifically, which at first, we found strange, you know, and then, I use Miro nowadays in everything concerning project classes, everything about the project...

Interviewer: You know you can get an account, you already have...

Interviewee: It's educational, right, I've got one [Laughter]. And then, but we are even thinking of buying through the Miro project to be able to have a bigger number, in one of the things of the project, in Canada, including your funding. But Miro was, for example, a really useful tool that we assimilated, like, right, not only in the GDS, but in other things as part of our practice. Well, you know, a lot of things, you know, also, this thing of finding big, coming back, when we thought of this thing that I told you, ah, go to the field, then we'll submit it to the group. I also think it is a reflection of what you were thinking of doing, you guys were too. I think in the struggle to try to do something else, right, in this terrible situation that we are in, so there was this, well, I think that marked us and also despite us actually. I think we even wrote up an e-mail making a criticism that we found the first laboratory excessive, because we didn't imagine, and I don't think you either, because if everyone went to Canada it would be different. We're there for that reason, but, no, we are here going about our daily lives, classes to do, I don't know what else, and then I had to organize all those Boards that you guys suggested. So, despite, I think we were one of those who made a criticism, we said there is no way, everyone being a mother, with children at home, with no school, Brazil with its situation of chaos, there is no vaccine, but despite that these moments were very important to help us to pre-organize the project, you know, because it's like that, right. You get asked to do something, you end up organizing. So, they were good, you know, we organized the biography. You had told us to make that board, we organized it, we already had it more or less in our heads. We had mentioned some things in the project, but it is different, you know, when you organize there, you know. So, we organized it, we used a lot of things, I even asked them to open the Miro there, because we want to copy that board to put in the project's Miro...

Interviewer: Haven't you been able to?

Interviewee: It's protected, it won't let you copy it. I even sent an email...

Interviewer: Send it to me, you have my email. Then could you remind me, because I was given a lot of paper at the university. I'm not managing to cope with the emails either.

I'm coordinating a master's degree, a series of things. If you can email me, then I'll take a look.

Interviewee: Ok then.

Interviewer: You went to [...] to that lab, didn't you?

Interviewee: I don't think so.

Interviewer: It was today or Friday, I don't know, just asking.

Interviewee: No, our meeting is on Friday. Friday I'll be there, Friday.

Interviewer: We try, in fact, I'll look for everything, but it's difficult, afterwards we'll separate it, it was too much, or it wasn't enough, we planned something here, another time we'll do it differently, we didn't imagine that.

Interviewee: But that's how it is. It still helped though, even though we were like, my God, I don't believe in almost any of this, but it helped, right, because it's a synthesis in which you already organize the work, the reports themselves. The reports also help us to see what we have. We already have it all, we...

Interviewer: And the newsletter?

Interviewee: The newsletter is cool too. Look, I'm going to tell you the truth, Chiara, I haven't read everything. I usually have a look, you know. I have difficulty reading English, you know, there are these things. I learned French, and then it made English even more difficult. But so, here's what I do, I glance over, when I see something that has more to do with our project, I read it. So, I don't read the entire newsletter, but it's really cool, because it's a way, also, to share. It's so difficult, and I think the richest thing about this GDS project is that we share with each other, with projects in Africa, China, and so forth, which is like what we're trying to do with ours, Maranhão. I think the richest thing is to put these projects up for discussion, learning from each other. The most wonderful project I think is the one about the kitchen, I don't know if you know which one. I love that project...

Interviewer: In Colombia.

Interviewee: Guys, that project is wonderful. It's the project I like the most. So, every time they show it, I'm like, it gives us a lot of ideas, you know, because it's not really very relevant, but it helps us a lot to think about our project in Colombia.

Interviewer: I think it was also very interesting to see the difference between what is worked on in Latin America, the focus of people in Africa, for example, the way of thinking about issues is very different.

Interviewee: It is, isn't it? One thing I saw, it's not a bad criticism, but we focused a lot, as we separated because of the language, I know Latin American projects very well, but the others I know less. I think it might be nice to have a time set aside, common projects from different countries, so I don't know, that work with construction.

Interviewer: That was one of the ideas, then we...

Interviewee: Because of the language, the difficult thing is the language.

Interviewer: Right, between regional meetings, some collective ones, we were afraid of overloading people, too, a little, but that, yes, you're right. I don't know why we didn't go ahead.

Interviewee: That's cool, because I feel that I know little about projects in Asia, Africa, and I know a lot more about projects in Latin America. I know about one in Africa that had a lot to do with ours, I remember, but I didn't have the name, I don't know anything.

Interviewer: Regarding Maria... something.

Interviewee: Which is about housing, right?

Interviewer: I'll see if I can find it, I'll put you in touch if you want.

Interviewee: So, I think it's cool. It's one of ones I said, oh, I'll get in touch, but not over coffee and we...

Interviewer: A quick question, did you put in your [...].

Interviewee: I said, but it wasn't very good, you know, because it was a man. It's not prejudice, it's not that, it was a man. I don't remember his name, but he was an expert man. I think he was an engineer, and his specialty area I think it was a little poorly selected for us. It was a specialty area in energy. It wasn't relevant, he himself told us, when I explained the project and he said, I think I don't have much to contribute, and then Raquel even helped me. Ah, does it have something to do with the language, because there is English, but I speak reasonably, and then she said, no, but you don't know any construction sites, women who work, and he said, no, I work in the energy area, I don't know what else. I can't remember his name. I can tell you it later, but I think you guys have it written down there. And, so, there was no, he practically didn't contribute with anything, you know, because I think it was a guy who had nothing to do within it, maybe it's not very specific, I don't know.

Interviewer: One thing, when things like that happen, write to us. We can, we are... find alternatives, things like that. So, Natalia has joined, I think her name is Natalia, but she works with something a little different, but somehow connected too, an urban space, built-up space and gender, for example...

Interviewee: Ah, cool, so it's more relevant then.

Interviewer: Exactly, I think she joined recently.

Interviewee: It might be cool.

Interviewer: I'll see if maybe I can get you in touch, ok.

Interviewee: Cool.

Interviewer: She's from architecture school, she came last year.

Interviewee: Cool. It's because he said this, he said, wow, construction site, no, and gender, no, and I said, goodness, then, and he himself said, I think I don't have much to contribute, and it didn't work out.

Interviewer: But when something like that happens, try to write to us. We'll see if we can assist in another way. Okay, eventually we'll get there, thank you.

Interviewee: Are the questions all done? Was that all?

Interviewer: Yeah, yeah, some things you answered by talking, so on and so on, so I'm going to send you this one, the record just so you know what, I've already said everything, just for you to check what I asked you, you know, and if you want I can give you the interview too, ok.

Interviewee: I'd like it.

Interviewer: Ok, ok. If you have something that you'd prefer not to inform, just say, Chiara, please cut that out. I'm recording it, I don't know why, but ok, it's recorded [Laughter].

Interviewee: But I was just going to talk about that issue of urban design here. I'm going to put it there for the group to think about and, maybe we can cover that in the report, something like that, okay. I think it's a very cool thing, because I'm seeing this, there's a summary to tell you, but we see it all the time, the subjects interconnecting, you know...

Interviewer: There's still a little time left, but...

Interviewee: It's still [Laughter] we asked to extend the deadline. Kelly also said she would answer, she didn't answer.

Interviewer: I think we are finalizing...

Interviewee: Ok.

Interviewer: We're finalizing on the 5th because they have to give approval. So, I think Kerry will send an email like, to get their final approval. So, as soon as we receive it, she'll write with more information...

Interviewee: Oh, nice, that's fine. Great, and we've already received the third installment.

Interviewer: Ok, finally, at least we resolved that. It was very complicated in the...

00:51:22



GENDERED
DESIGN IN
STEAM

ID79 - Modernization of the Batik industry as a potential source of income for unemployed women in Tanzania

Interview transcript

Interviewee:

Pendo Bigambo | Principal Investigator

University of Dar es Salaam

Interviewer:

Dominique Marshall | GDS Principal Investigator

Carleton University

Date of interview:

8 October 2021

Transcribed by:

Way With Words

ID79 - Modernization of the Batik industry as a potential source of income for unemployed women in Tanzania

Speaker Key:

DM Dr Dominique Marshall

PB Dr Pendo Bigambo

DM Good evening for you. Good morning for me, Professor Bigambo. I'm delighted to talk to you. We'll spend 90 minutes or so talking about your project. I should say the date. It's 8th October 2021. You are in Dar es Salaam, are you?

PB Yes, I am in Dar es Salaam. I work at the University of Dar es Salaam, and that's where the project is being held. We are working with various women within Dar es Salaam as well.

DM I am in Ottawa, I should have told you that, and I am a historian. I teach history at Carleton University. I'm part of that project as the historian. I do things like these interviews and talking about traditional and indigenous knowledge and things like that. Anyway, my main question, which is the main one really, and the first one is, we would really like to hear you tell us the story of your project from as long ago and as wide and as far as you wish to now. Just tell us how this happened and how it is going.

00:01:06

PB My project is about modernising the Tanzanian batik industry. We are doing that based on the batik industries in Dar es Salaam particularly. We decided to do that project because batik production has been in Tanzania for quite a long time now. Most people who do the batik activities are usually the women. They take batik as their employment. Usually most of them don't work, don't have any permanent job, so they use batik as the main source of income.

The issue with this batik industry itself is that the design that these women are using in the batik production, they have been the same for ages. When you go to one batik producer and you try to find what they are producing and then you go to another person, then you'll find them producing almost similar products. Even when you go to markets and you try to find these batik products, you always find the same kind of design and same kind of products all the time. That is one.

But another thing that inspired us to do this project is because of the chemicals they use, because of the technology that these women are using. Most of them are doing production usually at the back of their home. My knowledge of batik production involves a lot of chemicals and dyes, most of these dyes are usually toxic. But if you visit these women, you'll find them doing it by using their bare hands. They don't have any measures to protect themselves from the chemicals that they use.

But apart from protecting themselves from the chemicals, they don't even have any specific technology to do the production. You'll find someone using a certain amount of chemical today, and then tomorrow they'll be using a different amount

of chemical. You ask them, do you have any standard or are you using any formula to do this production? They say, oh no, I'm just doing it using my experience. We thought, okay, it is a good channel for these women because they can easily employ themselves.

00:03:34

But can we do something that will make this industry itself, not to the international level. Because if we are talking at international level, then we start talking about different kinds of people who will be involved. We just want to make this industry for these women more comfortable for them. It's modern production technology, but it's not modern to the level that these big manufacturers will adapt the technology. We want that technology to be specifically for the women. We want to modernise it, but we want it to be beneficial to these women particularly.

To do that, we are looking at it in two aspects. We are looking at it in terms of the design that they are doing. We want to try and convince them to use different kinds of designs. We've already done part of that, because we had a workshop somewhere in June. During that workshop, we wanted to develop new designs or new motifs that these women can use. We invited most of the women that produce batik, but we also had special designing.

We had experienced designers to help us to help them with the designing activities, but we had a moderator who is a well experienced batik producer. The moderator was there to activate these women's brains to come up with new designs that they can use in their production. During that workshop we had about 12 kind of designs, but with our project we took five of them, and we are trying to put those designs onto the fabrics now. We are going to try and produce the fabrics for them using the designs that they created.

00:05:41

That is one part of the modernisation. But the other part of the technology now, we have students who are working on the technology. We have one Master's student who is basically working on the... She did the data collection process. She visited these women to see how they're producing their products and things like that, and then she came back with the knowledge of the textile industry within the country. We're now trying to create a report for that. But we also have two other graduate students who are working on the dyes.

The dyes that these women are using are usually the batik dyes which are chemicals. These two undergraduate women students are looking at natural dyes. One student is looking at onion peels. The onion peels, we're trying to process it and see if it will work on the batik production. Then we have another student who is looking at turmeric roots. Using the roots, trying to extract the dye so that it can be applied on the fabric. We have another student who is looking at the whole process. That student is looking on...

I said before that these women use chemicals but they don't have any quantities. This other student is looking at specific quantities. For example, if they want to produce certain metres of batik fabrics, how much dye do they need for that fabric, how much considering chemicals do they need for that fabric. The temperature that they use for dyeing, the time that they use for dyeing, any other chemicals

that are [inaudible] the process. That is what the other student is looking at.

00:07:36

It was supposed to be a summary but I think I've talked a lot. That's where we are now with our project.

DM And where are you going?

PB We know the status of the batik industry, we're just compiling a report for that. We have natural dyes that we can use for the batik and we have the design. We are waiting for this person who is looking at the quantities, the temperature, the technology part of it, and then we will have another workshop. In this workshop, we will call up the women batik producers.

Then we will ask them to use the technology that we have, the dyes that we have produced and the design that we produce together and try to apply them on the fabrics. Then we will ask them to evaluate if what we have obtained is something that they can adopt to use them for their activity.

DM If I go back a little, it's really nice to learn the whole story. When you thought about which community of women batik producers you would involve in this project, did you think the whole of Dar es Salaam, did you think around you? Who is it that you chose to work with?

00:09:08

PB Dar es Salaam is divided into five districts. We have specific districts where women are being involved a lot in batik production. But we thought, okay, if we choose only these districts that are very much involved in batik production, there is a possibility that the other districts that do not produce at some point they will also start producing. We thought we will try to find a number of these producers at least from each district. From the five Dar es Salaam districts, we have chosen five batik producers from each region.

Of course, at some regions we are also getting men. We have some few men led SMEs within the participants that we are dealing with. But, of course, most of them are women. We've chosen five SMEs from each district and these are the ones that we are working with.

DM How did you find the five women per district?

PB It was a bit difficult at the beginning. But then they have some kind of an association that we found out a bit late during the project. It's because the batik production in the country, it's not a formal kind of business. I would say it's informal, everybody's doing on their own way. Even when we were trying to establish the database, we wanted to know where are we going to find this women. It was a bit difficult because of the way the sector itself is. But then we went to one market where women sell products.

We saw these women selling batik, there were a significant number of them selling batik and then we started talking to them. Of course, that was their selling marketplace, but they have their production places, usually their home. We started communicating with them, engaging with them at the market. Then from the

market, they start taking us to their homes. We started going to their homes where they do their production and things like that.

00:11:36

It was also very difficult for them to take us to their production places because they thought we wanted to do the business, so they thought we were going to steal their knowledge. Initially, it was quite difficult to get to them. But as times went on and then after our first workshop, that is when we even got more women because more women were free now talk to us.

Because the initial workshop, in my opinion, I think it opened their mind to see what we are really doing, that we are trying to work with them, not to be their competitors. After the first workshop, it was easy to get more participants for the project.

DM What's the association you talked about? You said you found later that there was an association.

PB It's not a registered association. They call themselves batik producers and sellers. It's just in the market. When you go to market places, they have different areas. You'll have areas where they sell batik, you'll have other areas where they sell vegetables, you'll have areas where the sell... We went to that area where they sell batik. It's not really a registered association, but they have this kind of association where they do batik [unclear].

00:12:54

DM When you did your initial encounter with them, which language were you speaking? Presumably they don't all speak English, presumably you speak something else, yes?

PB Yes, they all speak Swahili. Our interviews were in Swahili, and then we would go back and translate what they said in English. All the interviews that we did, we did it in Swahili but then we had to translate it in English to fit our reports.

DM So, all the students you hired were students who were fluent in Swahili, because they were the ones who were making the interviews?

PB Yes. Actually, Swahili is our national language, but we use English for teaching.

DM Everybody does.

PB The students know both languages, yes.

DM There is no different kinds of Swahili, it's everybody understands the same. There's no dialect or local variation.

PB No, we all speak the same Swahili. Even those who speak... We have the Zanzibarians who speak a bit different Swahili, but it's very clear, you can understand it.

DM You've spoken about the community. Tell me about the disciplines involved in your project, your own, the others and how you put your team together, and what you've learnt about the collaboration between disciplines as you work through this project.

00:14:28

PB In terms of the team, we are three investigators. It's me who is the PI, the principal investigator. I have a Bachelor's degree in mechanical engineering, but I've done my Master's and PhD in textile technology, so that's where the batik is. With the textile industry, I do specialise on the colouration or the dyeing and printing of textile materials. That is the area I work with. We have another one co-PI, Dr Mbonea Mrango.

Dr Mbonea Mrango did his Bachelor in chemical and processing engineering. Then he did his Master's and PhD in textiles. But he's specialising on the colour measurements. I do apply colours. But once the colour have been applied, he's the one who does the measurement to see that it matches one thing and another and all other instruments that are used in the colour characterisation. Then we have another co-PI, her name is Miss Safina Kimbokota. Miss Safina Kimbokota has a Bachelor and Master's in creative arts, so she's pure artist.

She's the one who has been helping us a lot with the designing of the patterns and things like that, but we go and do the engineering part of the project. In terms of the students, because of the nature of the work itself, we had more engineering students than the arts students. The student who is doing Master's is a graduate in petroleum engineering, but she has an interest in textile engineering. She has interest in textile engineering and gender equality, so we took her in to the project.

00:16:33

The girl who is doing turmeric dyes, she just completed her degree in textile design and technology. Then we have the girl who is doing onion dyes has a degree in textile engineering. Then the girl who is doing technology has a degree in textile and technology. These three have just completed their degree. I should just go back a little. Before the two other undergraduate students that we took over, we had one male student that we're working with, but he got a job somewhere else.

After they finished, they got the job and then he said, no, will no longer continue with you. We thought, okay, we'll take these two girls and they'll help us to complete our work quickly. That is the team that carry out the work [?].

DM That team, Dr Bigambo, was it a team you had already worked with or did you put it together just for that project?

PB I have worked together with Miss Safina before. We had a very small project that we were looking at. It was also about women, but it was more of encouraging women to do science subjects. We also had another project that was involving women doing weaving of baskets. But they were a very small kind of project that we've been working together with Miss Safina. But this is the bigger project that I've worked with her.

Dr Mrango is my colleague, we are in the same department. We have not done any projects together, but we do different activities within the department together.

DM If I understand well, the scale of this collaboration and also the fact that you three came together, that was new. As you work together, what did you learn about what you could bring to each other? Was that a good decision or are there other disciplines that should be in? Tell me a bit more about how that worked, the

meeting of you three as you were doing your stuff.

00:19:06

PB I think so far we're doing well. But at some point, we felt like we needed to bring someone with a degree in industrial management. Maybe in the future, when we try to do another project, we try to find someone with industrial management. We did that because, when we were doing data collection with the Master's student, we had some issues with analysing data and things like that. We thought, okay. The students who are doing industrial engineering, they have a programme that they talk about data collection tools, data analysis and the like.

We were struggling on how to create the tools because we, engineers, the tools that we use are usually the experiments, so you just go into the lab, you do your experiment and then you're done. But with us starting to create data collection tools like the questionnaires and the like, it was a bit difficult for us. But we managed to do it and we collected data and we're now analysing the data. Next time, I think we'll have to have a person from the industrial thing.

DM Just on this. Now you're about to do your second workshop and you will have people who will observe what's going on. Would you like maybe to talk a little with Emmanuel Mutungi, the design regional expert about the way to collect that data. Because he could be, I think, of some help if you may want to learn about other ways, more from design and social sciences of collecting that kind of data when you do your workshop number two.

00:21:10

PB Yes, I think that is going to be a great idea. Actually, with our first workshop, initially we had created potential participants for the first workshop. I talked to Mutungi about the participants, and he did advise me a lot on how to select participants. Initially, we were thinking, okay, we need to have three designers that we will have during the project. But Mutungi said, no, you shouldn't have three designers because they will confuse you guys. You just need one expert in designing.

We were thinking of having this big workshop with a lot of designers, but he said, no, no, that is not going to be safe for the workshop, and it was really helpful. We only had one designer and the moderator who was, of course, he has both design and manufacturing knowledge. But the workshop went very smoothly. It was very, very useful. With this one, yes, we will definitely contact Mutungi and ask him.

DM When I just send the interview to Kerry Grace and all that, my colleague here, I could tell her that you said that it's a good moment for Emmanuel because actually, he has to read your second report anyway, but that you are... When is your workshop number two, when is it?

PB We had a meeting last week, and we said we're going to have our workshop in the second week of November. We have this one, she is not a batik producer per se, she does produce a number of articles, but she does also a bit of batik. We wanted to take the design that we have, the dyes and the technology and to try it within her factory first before we can call the workshop. We're going to do this a week after next. Then after that, we are going to have a workshop with these women.

00:23:24

She's going to help us to perfect the process that we have before we can show this to the women. Because she's been doing this for ages so she knows what to expect and what not to expect.

DM [Unclear], so I will tell, today I have to send all this to Kerry and I'll say that it might be a good point for Emmanuel to reach out to support your next... [Unclear] discussion you had with you before number one, especially because as you say, there is no social science design person, like design of processes in social science too. He might be able to suggest ways of documenting that workshop, not only how you organise it, but how you document it to make it something that you have all you need to document in the best possible way. I'll tell them that.

That's really nice. That's interesting how you went about finding your team and how you work together and how in the future you might actually do more in the direction of data collection in a way that is larger than how engineers learn to do this. Very nice. So then, next thing I wanted to talk about... First thing I didn't tell you that, but is there a moment before, because we have another hour to go, where you would like to have a pause of ten minutes?

PB No, it should be okay.

00:25:02

DM Anyway, at any time if you want to stop, you tell me. Otherwise, I'll assume we'll go on for another hour.

PB Okay.

DM I'm okay. As you were thinking of the project, you had an idea about men and women, and you said already in your story that you thought about, okay, what is it that women do that we could make a project around? Then you said, we have one man batik producer, and then you said these are not full employment and all. You had an idea about how your engineering could start thinking about men and women for that project, and children and families.

Could you maybe tell us how your idea of gender was at the beginning, if it has changed or if it has been confirmed? Your ideas about men, women in batik production, what was it, has it changed, has it been confirmed?

PB I think it has somehow been changed, because initially, I thought, okay, batik is being produced by 100% women. But when we started visiting these batik producers, we saw that men are being involved in batik production. Of course, we have men who have their own firms, they have batik producing firms, so they're doing it also at their homes. But we have women who are producing batik, but they've hired men to do the design part.

These women, when we talked to them, they said, okay, it's a very hectic job to do the designing, stamping of the designs on the fabric or creating the pattern for the fabrics. They don't do that themselves, they wait for the men to do that for them. All they do is take the fabric and then dip it into the dye and that is it. In terms of gender participation in the batik industry, I've just learnt that everybody's being involved in the batik production. Of course, a large part of them is the women. But again, we have a significant number of men who are involved in batik production.

00:27:22

DM Are these men in their neighbourhood or in their family, or what's usually their relationship with these men?

PB Most of them are not in their family. Where they sell batik, we learnt that there are men there who have started their own businesses in creating these designs for these women. These women, they will ask someone from the market to go to their home and prepare the design for them. Most of them, they're not even their close families. That is where we learnt that that's why they're producing the same design, because they're all using the same men to do the designs for them.

That's why at the end, the products that we see are the same, because the designers are usually the same. With our first workshop, we try to encourage them to create their own designs out of their mind. If everybody will be sitting down and creating their own designs, even if they ask a man to draw for them, it is still their own design. Compared to them sitting home, waiting for the men to come and help them with the complete designing activities.

They're not really their relatives, but they are men who have employed themselves in this industry. I think they saw the opportunity then they decided to grab it and try to help these women.

00:28:56

DM You said also that one of the students that worked with you had an interest in questions of gender. And you yourself seem to have been working with Miss Safina there on things that are also women production, like basket weaving and all that. Could you tell me more about how you understand the part of women in the production of these things? What's your idea about women's work?

What do you take that from? Is it your own experience? Is it what you read? Is it what you see? How do you understand women's place in the economy and the technology and all that?

PB I think in most parts, I understand the women activities by reading, but also I understand the work of women by seeing. Again, I think maybe it's something that is natural within our culture. Because in our culture, women used to do home activities, to do domestic activities. From when we're being born, there are activities for men and there are activities for women. My origin, where I came from, where my parents came from, if you go there even now, you'll see clearly that these are activities for men and these are activities for women.

I'm lucky that when my parents brought us up, there were no activities for men and there were not activities for women. I would go to the kitchen and cook and then wash the dishes. I have a younger brother who, we were also involved equally in all of these activities. I also have an elder brother, all of us know how to cook, know how to clean. We didn't have any activities for men or women. But I could see other people doing that. Even by going in my local region, I could see these activities being divided for men and for women.

00:30:59

But unfortunately, the way these activities are divided, they always, what should I

say, they tend to make women feel lower all the time, they don't raise women up. Growing up, leaving home, going outside, I go there and I still see the women doing these activities that men cannot do. Like weaving of the baskets, you see rarely men dealing with weaving of the baskets because it is considered women's job.

Batik itself, a lot of people involved in it are usually the women, but men, very rare. Already there are these divisions of activities that people consider these are for men and these are for women. It is very clearly seen here within the country. Another example I would see, if I tell people that, okay, I'm a mechanical engineer, they'll be like, what? No, that is not meant to be for women, it's meant to be for men. It's really challenging to try and...

Because what I'm trying to do at the moment is, when I talk about science for women, I try to tell people, no, science is for everyone. It's not only meant for men, even women can involve themselves in science.

DM You have done, I think, with Dr Mrango some activities to try to actually send that message out that science was also for women. When you say that's challenging, so what are you facing when you do this? The kind of attitude you said that it's quite rigid, that people think that women cannot do this. What is it that you're trying to change when you do that?

00:32:55

PB What we are doing at the moment is not mostly with Mrango. I joined another organisation. We have this organisation which is called Organisation for Women in Science for the Developing World, OWSD, which is in Italy, but we are being told to start some kind of chapters within these developing countries. Here in Tanzania we have that chapter as well. By using that chapter, we do try to visit young girls in their school. We visit girls in school and then we talk to them that STEM and engineering is for everyone.

Because these people who go to talk to them are usually women who have a degree or even PhD in STEM subjects. When we talk to them, we encourage them that women are not meant to be in the kitchen. [Inaudible] STEM is also for [inaudible] and talk to them and encourage them. We also had a plan with this organisation to try and visit students and work with them within their labs.

When they have an experiment they're doing and then they want our help, we would go in and assist them with the experiment. We have not been able to do that but that is part of our plan also, to assist these girls in the experimenting. It's to make STEM fun for them so that they say, okay, so that they decide to follow the STEM stream.

DM Because the connection is a bit wonky, I'll put my video off but I'm going to be talking. Then when it gets to be better, I'll start again. But don't put yours off because we like to have you on camera.

00:35:00

PB Okay, no problem.

DM One of the things also that you have decided to do in your project it was there right

from the beginning, is you wanted to do something where you were making things with these women. That was really an important part of your project. Could you talk to me about this? Why did you put that there? Is it a new method for you? Did you use an old method but improved it? The place of making in your whole is very interesting in your project. Tell us a bit more about that.

PB Initially, we thought we'd work with a completely new method, but then we found it might be a bit difficult for them to adopt a completely new method. That's why we went back and we said, okay, we're going to work with their method, but we are going to improve it. The one that I was talking about the amount of chemicals that they need, we wanted them to simplify it. Because you will visit someone and they will tell you, we are using five spoons and then another person will also tell you, I'm using four spoons. But what kind of spoons are you talking about?

When we went back into the lab, we tried to measure different kinds of spoons. Then you say, okay, if they say five spoons, they mean ten grams of these. We tried to make it uniform. If we say ten grams, then it means another woman wanting to produce that knows that it is ten grams. They only need to get a weigh balance to measure their chemicals for doing their work, and not the spoons because even spoons have different sizes, so it was a bit difficult. We are working with their method, but we are trying to improve it a bit more.

00:36:56

We visited another person and we were asking them about the temperature they use for dyeing. We asked them, what temperature do you use? She said, no, I just wait for the water to boil. Then once it boils, I wait for ten minutes and then I put the fabric. What is the temperature that you're using for dyeing? They have no idea. We went back and we tried to do what they did.

We boiled the water up to boiling point and then we left the water for ten minutes and then we measured the temperature. We're trying to make their process easier compared to what they're doing now. We're modifying what they actually have.

DM You could have done a project where you would have gone in their kitchens and do this, collected it, measured, give it back to them, but you actually chose to bring them in and to do stuff with them. That part of it, like why did you decide to do this? What does that help do to actually bring them together and do things?

PB We thought that having them with us was supposed to be much easier because we're involving them 100%. Because we will say that, okay, we are going to create a system and then work with one person in the kitchen and another person in the kitchen, we thought that was going to be difficult. But having them together, we get ideas from different person because we have many of them. This one tells you I use four spoons, this one, five spoons.

00:38:44

Then we put those together and then we tell them, okay, we have used five spoons, this is what we get, we have used four spoons, this is what we get. Together we decide which one is better for them. Having them together with us, we thought it was going to give us a much better process compared to us visiting individual in their working practice. But we thought also it was going to be easy

and we would save time by having them all together with us compared to us visiting each and every one of them.

DM Then you will bring them all over again to actually demonstrate some of the stuff that you have sent. You will also involve them in it. Will they be able to try it?

PB Yes. The first workshop that we had was a two days' workshop. The first day we had the moderator training us on methods of coming up with ideas. Then the second day it was hands-on. We had groups, and in every group people were supposed to come up with a number of designs. This second project, we want it to be longer. We want it to be at least four to five days so that everybody gets the time to do it themselves. It is not going to be us doing the work, it's going to be them doing the work.

Then at the end, we want them to evaluate the method that we've created and asked them to tell us if the method is okay for them. If not okay, what can we do to make them adopt the method that we have developed. The second workshop is going to be longer because we want them to be involved 100%, so that at the end we come up with something that they will really use.

00:40:39

Because we don't want to spend lots of time working on the project and then give them the method and then they just say, oh no, this is not going to work for us. We want to develop a method that they will adopt and work with it.

DM Have you ever done anything like it before?

PB Never. This is my first time and I'm very, very excited.

DM As you invented that, so how on earth did you come up with the idea? You just thought, okay, that would be a good idea? Did you read around? How on earth did you design these two workshops?

PB The designing of the workshop was more of a discussion. But how I came up with the batik project, it's because one day when I was teaching... I do teach dyeing with my students, I talk to them about dyeing and things like that. When I was talking to them about batik, they asked me a lot of questions like, madam, when we visit these people, when we go out there, we see a lot of batiks but we don't know how it's being produced. We don't even know how much batik is being produced within the country. We don't have any data on the batik production.

The students asking me about batik production process, but at the same time when they walk around the street, they see a lot of batik garments but they don't know the process. They don't know how much is being produced. They don't know how much is being exported. It came back to my mind and I said, okay, I have to do something about the batik industry Tanzania. Batik in Tanzania has been there for a long time, but when we were trying to find data, no data. It was very difficult to get literature for the batik production in Tanzania.

00:42:37

From my class, I thought I have to do something on the batik. Then I started talking to Safina, telling her what can we do to do something on the batik in Tanzania. We

thought, okay, maybe we should come up with a project one day and see what happens. But then while I was talking to Safina, a call from IDC, from you guys, it came out that we are looking for proposals to do activities about gendered design and the like.

I thought, okay, we can take this opportunity to design a proposal that is going to help us in terms of technology for the batik industry itself, but at the same time will help women who are the most producers of batik. Then we said, okay, we should do this. But during evaluation of how we are going to achieve this, we wanted to get better on the batik, but at the same time we wanted to make sure that these women come up with something.

That's when we thought, okay, whatever we are going to be doing, we are going to involve these women batik producers. That's when we decided even when do we do the workshop, the workshop that we're going to do is going to be involving these women. That's how the two workshops came.

00:44:10

DM Then the idea to do a first one and a second one and to divide it in these days and all this, this is just straight out of your head and Miss Safina? You just thought, okay, this would be a good way to work.

PB In terms of two workshops, we knew that with what we were going to do, we really needed two workshops. Because we wanted one where we get the design and then we wanted the other one where we show them what we have been able to produce. Like the second one, we wanted it to be more like a feedback kind of workshop. But then when we had, I think it was during the lab one session, we were talking about this workshops and Kiara asked me on the organisation of the workshops.

She had that question that asked me about the organisation of the workshop. That's when we went back and sat down and tried to find out, how do other people do when they have this kind of activities. If you want a workshop that will give you feedback on a certain activity, what should we do? We talked to Mutungi, but we also, with our own kind of discussion when we were trying to brainstorm and see how we are going to make this effective, we thought, okay, having these two workshops is going to be much better.

But when we had our first workshop, during the first workshop, the feedback from the participants, they said, that workshop was too short for them to give us all their ideas that they had. They said, the next workshop, they want it to be a bit longer because they want to spend more time working on it. By spending more time, then they'll have more ideas to give us on how to make their activities even easier. Apart from our ideas, we also had these ideas from the participants of the first workshop.

00:46:12

DM The other thing I'm seeing, I'm just going to tell you this and see if you believe what I'm saying, is you have quite a lot of experience teaching. When you say, and then we'll bring the girls in the lab and we show them things and all that, so you also have your own pedagogical ideas about what's an efficient way to involve students

in making stuff. I suppose that might also have influenced the way you thought about that workshop.

Next question. How on earth do these women who work in their kitchen and say five spoons and that ten minutes after boiling, where did they learn their own thing?

PB When you talk to them, then you ask them, I visited someone, I saw them producing it, then I learnt from them. Most of them learn from their colleagues. But we have, it's called VETA. We have Vocational Education Training Authority within the country, who also teach batik production. Unfortunately, we were not able to involve them within our project because of the time differences, because they had their own issues at that time so it was a bit difficult for us to involve them within our project.

As I'm talking now, I'm thinking, okay, because we are organising the second workshop, I think we need to try and find them again this time. But these people, they do train women on batik production. They have this course that they train women on batik production. We have some women who go there and learn and come and they work. But again, the thing they are learning is usually the same. They just get basic knowledge on how to produce batik, and then they go back home and they start doing the production process.

00:48:27

The same technology that they get from this training authority is what they come and use. It's basically the same thing that these women are doing because all of them either learn from this training authority or they learnt it from another person who learnt from the Vocational Educational Training Authority. We have this training authority who are providing the education, but most of them are learning from other people.

That's why I said at the beginning when we went to visit them and we're trying to ask questions, they were like, no, we're not telling you this, because they thought we are going to steal their ideas.

DM You see that goes against what I thought. Maybe you can tell me that, so if I'm a mother in my kitchen, do I show my daughters? I thought they would have learnt from their family.

PB We have some who have done that. We had one participant who we... We have older women who are dealing with batik, and then we had these younger women who were dealing with batik. With these younger women, what they said is, oh, I learnt this from my mother, or my family has been doing this for years. We had those people who have learnt from their families, but we also have people who went to training.

00:49:49

DM Next thing I wanted to ask you is about, you answered that in some of your report. But if you could summarise it, how did you have to adapt with the COVID pandemic and how did that change your project?

PB At the beginning when the pandemic first started in 2010 [?], I think we had not yet started the project, so that was not a big deal. In our country, we had issues with

the pandemic in the first six months, so from around much last year up to around September, but that is when we had issues with the pandemic. After that, I think the president declared that we were clear with the pandemic. At that moment, we were at least able to work.

But then it started again somewhere around, was it December, January, the pandemic started again. At that time, people started to pull back, there were a few people meeting and we started going visual most of the time using phones and things like that to communicate. When we started the project, it did not affect us to that extent. We were taking measures. We said, okay, the president declared us clear, but we ourselves decided to take measures.

Of course, some of the data were collected by us visiting these people, but at some point we had to use phones. We were calling these people because we already had some kind of database with these women batik producers. We were doing some interviews by calling them and talking to them on the phone. When we did our first workshop, again, the pandemic, it wasn't that heavy, so we were able to do the workshop.

00:52:09

Initially, we said we are going to have 30 participants, but because of our own measures, we cut that down and we only had about 20 participants for the workshop. We also used other measures like to try and keep distance. Although when taking pictures, we had to come together and take the picture. But yes, we tried to do some other measures like wearing of masks, sanitizers.

We bought sanitizers for everyone, so everyone was trying to sanitize all the time. But the only effect that I think the epidemic has to us is it limited the time that we visited these batik producers. But otherwise, it didn't affect us that much.

DM

I saw these pictures and I [unclear] of the measures and all that. I understand what was going on then, it's really nice. Now I want to ask you more generally about how your project intersected with the general gender design programme. You've told me already that at lab one, there was a question by Kiara which led you to think about your workshop. You also talked with Emmanuel Mutungi about, with that view [?], that he suggested fewer designers in your thing.

You talked about sending your report. Then you talked about when you received a call and you thought that's good because that's something that you had been discussing with Miss Kimbokota. Can you tell me the story of the interaction between you in Dar es Salaam and this project and where and how it has had an influence on what you're doing?

PB

As I said, we're doing the project in Dar es Salaam. Initially, when we were talking about gender, we thought gender meant women, but we found out that there are men who are involved in the project, so we have men participants in the project. In terms of where the project has had an influence, I remember when we were doing it at the beginning, we're going to collect data, I thought, okay, are we going to get anything out of it? But with our first workshop, it was very touching.

00:54:42

Because when we were talking to these people about what we wanted to do, when

we were trying to talk to these women to come up with their own design, I would see them how much they... They would be like, okay, when are you going to give us this? We've been really, really struggling to get something like this. In my opinion, I think when this project is complete, when we have tangible products that this is what we've produced out of this project, I'm sure it will be very profitable to these women.

Because I remember seeing them during that workshop, they were very, very pleased. I would say, they would see us as their saviour that we have had these problems with these, we don't know where we're really going. But with your project, you're creating an easy path for us to go through. When it is complete, I think it's going to be very, very useful to these batik producers.

DM Have you got anything more to say about, say, the workshops, the Balton [?], the call for proposals, your interactions with the sector expert, the regional expert, the team in Ottawa, the other projects in the region? Is there anything about the GDS programme there that you've not mentioned to me, or you've told me the whole story about that?

00:56:15

PB I think I've told you the whole story. Mutungi has been very helpful with us. I even talk to him through WhatsApp. If I have any issue, I can just text him and say, okay, I have this, Mutungi, can you help me on how to go about this? He has been very, very helpful. The GDS team at Carleton University have also been very helpful. Sometimes I wake up at night and see, okay, Kerry has already sent me an email. They've been very, very helpful in making sure that our project is going as it is supposed to.

DM Did you actually meet Mika Westerlund, the sector expert? Did you have any interaction with this fellow, Mika, the guy who's the engineer who's supposed to maybe help you sometimes? Or you didn't have any interaction with these people?

PB No, we have not had any interaction with him.

DM Also, I wanted to tell you that, have you seen that there is a workshop on prototyping coming in a few weeks?

PB Yes. Is that the lab two?

DM Yes. Are you going to be able to come?

PB Yes, I have registered for that and will be attending.

DM That will be marvellous, because what you're doing will be so much interesting for the workshop, so I'm delighted that you're coming. The other thing is that we will have at the end a virtual exhibit, some kind of place on the Internet where we will showcase all the 20 projects. We're now trying to design the platform for that and all that. Have you got any wish or expectations about this that you would like to convey at this point or you're not there yet?

00:58:05

PB We're not there yet. I think it'd be very interesting to show people that we have been able to produce this thing that these women batik producers are happy to

receive it. I just wish by the time of exhibition, I just hope that we would have done our work, we would have done the second workshop and we would have the feedback, so we'll be showing you the prototype that we've produced and we'll be giving you the comments from these women that we are working with. I'm really looking forward for that.

But I hope that by that time, we would have done every aspect of our project, and that would have been interesting that way. Because if it will be complete, it's going to be much, much interesting compared to us presenting something that is not really complete. I want by the time we are presenting, we want you guys to see the whole prototype that we've produced.

DM We've got 20 minutes left, so we're in good time. The last general theme I wanted to talk to you about is the future. I wanted you to talk about the future of your own venture area [?], these batik women in Dar es Salaam and where do you see that going for yourself and for your team, and then maybe more large. In Ottawa here, we receive that money from IDRC, and this is money to try to foster 20 projects about women in STEM and the help of the arts and humanities and design to do that. They never told us and then we will do something else.

00:59:56

As far as we're concerned, we can finish all this next year and it's over and we make sure that everybody is okay but we go away. Or we could find ways to continue some of these collaborations and these networks, and maybe try to do more of some of that. There's two questions there is that how locally do you see your thing going? If you have your say, how can you help us here imagine possible ways to continue supporting these things or grow these things or whatever?

PB In the future, when I look at the batik industry within the country, I feel like when I'm done with my work, when you see a batik, you know this batik is coming from women batik producers in Tanzania. Because at the moment, apart from the few batik here which are usually the same, we have these batik which are coming from the far east, the Chinese and the like. We have these kind of mixed batik materials that are coming.

Unfortunately, the batik that are being imported, they're not of as good quality as the ones that these women are producing. When I'm looking at this project of mine, I'm trying to look at the whole batik production within the country. I just wish that at the end, the batik that are being produced here in the country are of quality that will make this batik that are being imported to be put aside. Because by doing that, more women in the country will have an opportunity to involve themselves in the batik production.

01:02:04

Because if there are these cheap batiks that are available in here, the market for these local producers is challenged. It becomes difficult for them to produce something that they're not sure of the market that they have. For me, I feel like we need to strengthen the batik production within the country so that it benefits more women. Because if the market is there, if the market's available inside the country and outside the country. The quality is marvellous. If you see the batik that is being produced, is really, really fantastic.

But because of these other batiks which are cheap, I feel like these women are producing just because they don't have any alternative to do it. They're just doing it because they have nothing else that they can do. But if their batik is the one that is the hotcake, then I'm sure most of them will involve themselves with the batik and it will be a good employment opportunity for most women within the country. In terms of the Carleton University continue with supporting the project, I think I'll have to sit down and see how that can be done.

I think at the moment, my thinking is just to make sure that these women have this proper kind of manufacturing or production system. But I haven't thought what happens further. I remember one person was telling me some time ago, he was telling me, Pendo, you always have a lot of ideas. He said, that is usually the problem for many researchers. I have a lot of ideas, but in my ideas I don't involve people like the marketing people and the like.

01:04:13

Because when I'm working on a project, all I'm thinking about is to publish the results so that other people can use the results that I have obtained. But that person was trying to tell me that, okay, apart from publishing the work, I think you need to open up your mind and think of something else that can be done.

I'm seeing it now as you're asking me the questions that I need to really sit down and focus and see what happens. Because as for me, I'm just thinking of, okay, I need to publish this so that other people can see what the batik industry in Tanzania is all about.

DM When you think of publishing it, just for that also, where would you normally publish things like that?

PB We have regional journals, so I can publish it in regional journals. But if I make it in a general aspect, then I can publish it in any other international journal. But if it is specifically for Tanzania, I'll publish it in regional journals. We also have journals within the country. But I do prefer the regional journals because most challenges that we have in Tanzania, they're also replicated in other countries within Africa. If I publish it in regional journals, then it is more applicable to more people within the continent other than publishing it within the country.

DM Just back to, so I try to understand. When you do teach dyeing and textile engineering and all that, who do you teach it for, people who work in the industry? Who are the people who are learning that?

01:06:09

PB I work in the department of mechanical and industrial engineering. Within the department, we have a number of degree programmes. Among the degree programmes that we have, we have two degree programmes for textiles. We have one for textile engineering and we have another one for textile design and technology. We expect the graduates when they finish, they go and work for the industry, but some of them also do employ themselves.

I teach these undergraduate students on the dyeing and finishing aspect of the textile material, so it's usually for the undergrad students.

DM What kind of industry are we talking about, big factories in Dar es Salaam, what is it?

PB We have some big factories. We have textile manufacturing factories in Dar es Salaam. We have also factories in other regions out of Dar es Salaam. These graduates are usually employed within these industries. Of course, the textile industry in Tanzania has been going down for some time. It's just, I would say, in the past eight years, is when the government has been trying to revive the industry. But it has been going down for some time.

In around 2008/2009, we had very few experts in textile. That's why they the university decided to start these textile degree programmes. Because of the lack of the experts in textile, even the industry themselves were dying. That's when the government decided to intervene and see how to revive the textile industry. There are a lot of measures that are being taken by the government to revive this.

01:08:14

DM That textile industry when it was at its height, this is me not knowing nothing about Kenya economy, was it an exporting industry?

PB Sorry, can you say that again?

DM The Kenyan textile industry... Are you okay?

PB Yes.

DM I'll try again. The Kenyan textile industry at its height, was it an exporting industry?

PB In Kenya, they do export textile. But in Tanzania here, we have four industries that are exporting textile products outside the country, but most of them are producing it for the country. Most of the factories that we currently have, some of them, they have this kind of an agreement. We have one factory which is producing, we call them Export Processing Zones, EPZs. In this processing zone, they produce textile materials specifically for exporting. But we have also other industries that are producing for the country and some of them are also exporting.

DM How did you learn your trade? Did you learn it from people who are working with the industry? How did you learn to do textile engineering, there was good professors at your university?

PB No. I did my Master's in University of Manchester and then I did my PhD in University of Leeds, so those are the very good universities in terms of textiles. That's where I learnt the textile.

01:10:08

DM I was just looking at my notes that I took as you were talking. These four textile large factories that you're talking about now, they have no link with the more artisanal batik production. These are watertight things. They're not connected at all. Like the women who produce batik in their kitchen, have nothing to do with the people who go and work in factories and the factory people.

PB No, they're two different people. The industries are more like producing for... They're usually big production companies, so they don't even know what is

happening with the women batik producers. What these industries are mostly producing, they produce kitenge and kanga. These women, they are not capable of producing kitenge and kanga. They only produce these batik garments. They're two different industries. The women batik producers, all of them are SMEs or even micro.

DM When you say that some of your students become self-employed, what do they do, these ones?

PB We have some of them who are also going into the batik production. We have some of them who are opening garment manufacturing industries, so they'll start creating fashion design kind of garments and sell them to the people. But usually they also create very small kind of organisations that they work with.

01:11:53

DM That's all I wanted to say or ask. Is there anything you would like to add to all that thing? It was very marvellous to learn all the details of what you're doing.

PB I think I don't have much to add, but I just wanted to appreciate the Carleton University for giving me this opportunity to do this project. Because I feel like once I finish it, I'll be somewhere close to fulfilling some of the dreams that I had regarding the batik industry in Tanzania. I really, really appreciate the Carleton University for the [overtalking].

DM Do you still talk to your professors in Leeds and Manchester?

PB Yes, I do. The professor who I worked with at the University of Manchester moved to the University of Leeds, so that's why I did my PhD at the University of Leeds. I still talk to him. We still communicate. Because when I was in Manchester... I also have interest in textile recycling. With him, we are much more involved with the recycling of textile waste so that we try to reduce the amount of textile that goes into landfill.

Because if you walk around, there are a lot of textile rags that are being thrown around. With my professor, we try to work on how to recycle this material to produce other things out of the waste textile material.

DM Does he know what you're doing about batik?

PB Yes.

DM Is he interested?

PB He is, but I think he's more interested with the recycling and natural fibres part of it.

DM Thank you so very much. It's been a pleasure. I hope to see you again in the prototype workshop. My colleague, [unclear] will be leading it, but I'll be watching as people are working. Have a good evening and thank you for the time. Thank you.

PB Thank you very much, Dominique.

DM Goodbye.

PB Bye.

01:14:09



GENDERED
DESIGN IN
STEAM

ID33 - Improving access to financial services to enhance women's economic empowerment in Ethiopia

Interview transcript

Interviewee:

Getachew Hailemariam Mengesha | Principal Investigator

Addis Ababa University

Interviewer:

Dominique Marshall | GDS Principal Investigator

Carleton University

Date of interview:

19 October 2021

Transcribed by:

Way With Words

ID33 - Improving access to financial services to enhance women's economic empowerment in Ethiopia

Speaker Key:

DM Dr Dominique Marshall

GM Dr Getachew Mengesha

00:00:03

DM Good morning for me and good afternoon for you, Dr Mengesha. I'm delighted to meet you on this 19th of October, 2021. Are you in Addis?

GM Yes, I am in Addis Alibaba.

DM And me in Ottawa. This conversation is about the whole of your project. The first thing we wanted to ask you, and you can go as far back and as widely and for as long as you wish, is to tell us the history of this project, how it came about, how you thought about it, how it developed, everything, the story of it.

GM We first saw a call for this project through the website. We went through the requirements. The requirements stipulated that we prepared a fairly concise fairly. That proposal was evaluated. It was a two-phase evaluation. The first one was an expression of interest. We submitted a five-page document. Then we were shortlisted and an announcement was made for us. After that we presented a little bit of a detailed research proposal.

00:01:44

After that the award was granted later to us. Then we went through the formal contractual agreements. It was a little bit of a lengthy process from our side and Carleton's side. After that process finally the project funds were released and we launched our project through a two-day inception workshop. That's a short history.

DM It's about the longer story. How did the idea come about? Where was it coming from? How did this whole idea of working on improving access to financial services for women, where did that come from? Why this one and not another one?

GM This idea came because of our background. We first saw the call and when we went through the requirements stipulated in the document, we saw a window where women in our community are marginalised especially. Women's economic empowerment is very critical, because when you see our culture, we are a male dominant culture.

The demography is changing a little bit now. When we see the process our mothers and grandmothers have gone through, our community is more a patriarchal community, more male dominant community. The male or the father

of the house is responsible for the livelihood of the entire household, the breadwinner of the house.

00:04:13

The women in the house, they're supposed to be the recipient of the finance. Usually, they don't generate their own income and they entirely depend on the male. That heavy dependency was one reason why they were for generations leading impoverished lives. Every inequality in our community boils down to financial freedom. Women don't have financial freedom. That's the core point.

Actually, we were working with a bank called Enat Bank. This is one of the banks that were established to enhance the economic problem for women. That's the core value of this bank. When we went through their annual report and magazine, we had a very good inspiration. In this book you'll find several financial products and services targeting women.

There are provisions, banking products and services targeting women entrepreneurs to expand their business, as well as to help women to get into business, to start their own business. We went through about five products that exclusively target women. But the sad thing we noted is although these products and services are out there, many women, especially less educated women in the household, do not have this information.

These days when we see the penetration of mobile phones, mobile phones are highly used in our community in houses where you can't find a fixed line. These days mobile phones are available even in rural communities. This is an ideal platform for us to experiment on how to deliver this important information to women. This device is on their hand. Scaling out the capability of these devices through additional mobile software systems, they have the devices readily available on their hand.

00:07:24

If we just put something that really pushes information to women regarding financial issues, eventually women become more financially literate. Financial literacy is the basis to gain access to finance, to use that finance and improve livelihood. I'm making things slightly concise. You can ask me further questions.

DM

In all this there was the bank, there was your... The bank was there. Your understanding that some of these products were not getting through women that were poorer and especially women in rural areas. Then there was the technology of the phone. You thought that all this could lead to something interesting. To what extent did you know that bank before? Had you worked with these phones before? Had you worked with these rural communities? What in all that was building on your old work and what in all that was new?

GM

Previously I had conducted research on microfinance institutions, how we learned about microfinance. In 2010 we conducted a study on microfinance institutions. We used machine learning algorithms to predict loan default rates from microfinancing institutions. Institutions when they are established, they were targeting the poor. I hope you have some background information about these

institutions. Now, a substantial number of those beneficiaries, they have actually transformed their lives.

00:09:39

But also there are a good number of people that default on their loan, so we want to predict loan default rates. Once we get this information we have an economist in our research group, and the economist will take that information and explore further. In that process we had seen microfinance targets women. Gender was not an issue. There is no affirmative action related to gender. In general, it targets poor people. Women are in that category and they were some beneficiaries.

That is the first encounter to engage in financial literacy related scales.

DM And then it's out of these results that you thought that doing something which is more targeted at women and using their phones, so it's an experiment with a solution to a problem you had discovered or documented in this 2010 study.

GM Yes, that's one of my inspirations. The machine learning algorithms provide you some attributes. There are a range of attributes. Based on those attributes, the attributes are those criteria selected with domestic spend, based on the domestic spend algorithm, target and manipulate the data and predict something. One of the results was literacy related issues. The reason is these microfinance institutions usually provide a rudimentary type of orientation or induction when these people take loans.

The entrepreneurial qualities, capabilities matter. We don't without entrepreneurial quality, this kind of talent is very difficult to borrow money, use that money to conduct business and repay the balance. This is one of the problems, this very high level, and the prediction, some of the features selected in the attributes are literacy related issues. This study exclusively focused on literacy aspects.

00:12:46

DM As you were designing this new step in a way, or this outcome of your 2010 project, were you using the same team as 2010 or did you reconfigure the way that you would prepare this one?

GM At that time I was a PHD student. I did it with my professor, the professor that taught us this artificial intelligence and machine learning. We picked a topic in microfinance. We added one research assistant. Three of us published that in SN Journal [?]. The current project is entirely new. We established an entirely new team. Actually, my professor, the earlier professor was a woman. Luckily when we published, we were two male and one female professor. The professor was our mentor actually, the lead researcher.

The current project, when we put together the team, we carefully selected and involved women. Actually, four of the research team are my former students. Now three of them are colleagues. We are working in the same department.

They're lecturers at the same department and formerly they were my students. The team configuration, the team structure is entirely different.

00:14:56

DM So when you put that team together and you structured it differently, like you told me before in 2010 there was an economist helping you making sense of your results. In this one, how did you think about the disciplines that you would involve in that team, if it was completely different? They're not all from your department, they come from different departments, or?

GM From different departments. These days we have members from social psychology, from the Psychology department, from Software Engineering and from Information Systems. We're an interdisciplinary team. We haven't thought of bringing in an economist. We are now consulting individuals for such. We consulted gender experts in a couple of sessions.

In our validation workshop as well as our inception report, we involved experts in gender. In our university we have a Gender department. We involved them directly through workshops. In the seminars we are involving experts.

DM If I backtrack a bit, so you did our 2010 research, if I understand it that was part of your doctoral work. This is an outcome of it. Is there one of many or is it really the direct outcome of it? Have you done other things out of that initial 2010 research or is it the main next one?

GM This one is the main one because in that one what I observed, like I said earlier, is a literacy aspect. This one 100% fits in that research article. What we observed in that study, the research, what we observed there is now better reached in this study.

00:17:18

DM And that particular bank you mentioned, was it the one with which you worked in 2010 or is it a new one?

GM This one is entirely new. At that time this bank was not there. Relatively speaking this is a very newly established bank. We've got 22 or more commercial banks. This one is a new entrant into the market.

DM How did you come across that bank? Is it all over? Do they advertise? How do you know about them? How did you decide on that bank?

GM Through advertising they've been raising. Their advertisements were very aggressive and through mass media. What's made them unique from other banks is that they focus on women, economic empowerment. That was catchy. After the establishment of this bank, actually, most commercial banks, or most of the 22 commercial banks have embraced the idea of that bank and are providing banking products and services that target women.

DM So when you were doing your research in 2010 you were researching financial services that were in other banks, other more traditional banks?

GM Microfinancing.

DM Microfinancing from older more established microfinanciers?

00:18:55

GM Yes. At that time the microfinance institutions we considered as a case was about 15 years old, probably more than 10 years old. It was already there.

DM I'm going to shift my question a little now. When you say the project comes from the understanding of our culture and the understanding of the place of women in finances with our mothers and our grandmothers. When you think about our culture, do you think about your city? Do you think about your country? Do you think about where you come from? Which group are you thinking about?

GM Actually, I started with my family, starting from my mother. I'm the first from the family to get my university degree. I can consider us the first elite generation, probably. If you see how my mother raised us, she was entirely dependent on my father. Actually, she was engaged in small businesses, like making local beer. We have a local beer. Now there are products of local honey drinks. They used to make that and sell it on market day.

We had two market days, on Saturday and Tuesday. They generated a small amount of money and with that they supported us. For instance, when we lack pens or pencils, instead of asking our father it was very easy to ask our mum, and that way she used to provide us educational materials. I was wondering, her working capital was very small. Without working capital, especially towards when I was a university student my father passed away, and the entire household burden fell on my mother and grandmother.

00:21:39

Actually, they were very strong enough. They just struggled to sustain the family with these small businesses they used to conduct. That's my inspiration. I was wondering if they'd got some financial services, they could have expanded their business. They could even have transformed their local beer, which is very popular. At that time it was highly demanded. They sell it and they finish probably within two hours. The demand is there, but they're short of supply because what they have, their working capital is very small. I have noted all of this.

If you take my mother and grandmother, if they had opportunity for financial access, they could have transformed their lives. Some of my sisters couldn't get the educational opportunity that I could, and some of them have taken over my mother's business and are still there living with that. Now they are in a better position, relatively speaking, compared to my mother. My sisters have access to finance, beneficiaries of microfinance schemes and the like.

It starts from family. The same is true when you see our neighbouring households almost were in an equal position. It was starting from my family, you can go to the community, society level, and then it's at national level. It's

nationally for now. That's normally what we observe at a national level is an accumulative issue starting from the family.

DM That's a very nice story. When you say we were going to market, meaning your mother and your grandmother were doing this with their children? So they involved their children in the market?

00:24:12

GM What they do is usually they sell this honey and local beer within the house. Our residential house, during the market days they prepare it for the market, people come to our house, buy these products and consume. They sit down. For a while the house would be turned into a grocery. It's for four hours a grocery. When they finish, they clean. You'll see the same thing. It's almost still the same.

Most residential houses serve a dual purpose, especially in rural and semi-rural areas. In these areas during market days, usually they use the same house for selling products, items, drinks and the like. When they finish, they clean, and they convert it to the usual residential house.

DM So when you say that your sisters, they did have access to microfinance, or they should? They did?

GM Yes. One of my youngest sisters, she's now doing well. She was a beneficiary of microfinance. In that way she developed her economy and she's now hired by a government institution. She's now working as a government employee.

DM That early on, did that inform the fact that in 2010 you went to work on microfinance? Were you already thinking about your family when you were doing this?

00:26:19

GM Yes. At that time microfinance was entirely a new phenomenon. The idea originated from areas like Pakistan and India. It's adopted in Ethiopia, particularly through individuals who played a leading role in introducing microfinance schemes in Ethiopia. At that time one of my younger sisters was a beneficiary of one of these microfinancing institutions. I observed when she got a small amount of money, she reported to me that she received a small amount of money from microfinance to start the business she was running at that time.

It was a very hot issue. You'll see in many publications, mass media advertisements, the business or marketing hype was very high at that time.

DM In this project you did some research with some rural communities. How did you decide on which community? How did you decide who you would ask, who you would study? How did you do this?

GM The bank we considered as a case is still working with microfinance institutions. This bank is not fully a commercial bank. It's now working with NGOs. For instance, it receives funds from USID. USID is USA, they are working with USID. They are receiving some amount of money, seed money, from USID to lend to

selected women, especially for those women who lack the collateral. Unless they have some fixed assets, collateral is mandatory.

Either they created a so-called group collateral. So instead of lending to a single individual, a consortium of five or six lenders. They just created a relationship, and consortium. A group collateral scheme was developed. That way the risk of lending is minimised. USID and the NGOs inject some seed money into this bank.

00:29:40

Behind the scenes, especially to reach out to the rural community, and that bank is based in Addis Ababa and some regional towns. Most economically poor women are residing in rural areas, so the microfinance institutions are very close to the rural communities, that's why that bank is working with these microfinancing institutions. In that bank we have identified some microfinance institutions.

Also, we are interviewing them as a beneficiary, how they are [unclear] in that bank, how they get funding from another bank, how they provide the funding they got in that bank to the beneficiaries. Luckily, the microfinance institution is within the sphere of this research as well.

DM If I understand well, the way that the bank was working, in which communities they were already working with, influenced which communities you would work with in your study?

GM Yes.

DM Did you just phone the bank or went there and said, I like what you're doing, I'd like to work with you? How did you do this?

GM We have to go frequently. Even tomorrow, three of our research team will go to the bank. The bank people are very cautious. They don't want to lose their business strategies. They want to keep their business sacred. Usually, the environment is very competitive. That's why they are very strict when they provide us information.

00:31:49

Actually, we don't demand strategy related information. That's why usually they are very pessimistic when we approach them through telephone. Luckily, the headquarters of the bank is very close to our university, and our research team frequently visits their headquarters. Through the headquarters we interviewed about four department employees in this headquarters, and we also have interviewed some selected beneficiaries of the bank. Now we are trying to get to reach microfinance institutions connected to this bank.

DM That's really interesting to know. The very first time you asked that bank would you work with us, did you just show up in the bank and have a meeting with their director? How did you do that?

GM The first time we went and discussed with the business development officer. That was a very nice guy. We were very lucky to meet that person. He's a very knowledgeable individual. He briefed about the bank products and services and finally he gave us his bulletin. We got his bulletin and we went through the bulletin and identified the banking products and services. This is the basis for us to even develop the research proposal, even the initial consult paper.

DM If I understand well, in this partnership, what did you convince the bank you could help them with? Knowing their clients better? Why would they be interested in your study?

00:34:13

GM After receiving this information and drafting our initial call for proposal paper, we went back to the same individual. We discussed with this person, we showed him the products and services that are made ready to women. He himself told us that the bank has a problem in terms of reaching and marketing its products and services. At that point we raised the issue of using the available information technology, like mobile phones, to reach out to women, and that will enhance the literacy of women. I think he appreciated that.

Our endeavour, when we finally received the grant, we prepared a memorandum of understanding. Our university has signed a memorandum of understanding with the bank. In that way, the relationship has already been legitimised.

DM So then we backtrack again. A lot of what you could see came from your understanding of the economy of your community. What about what you understood of your community use of mobile phones?

GM We have now in the IT domain, I'm from an information systems background. My PHD is also information technology. We have been conducting related studies. For instance, my research PHD study was on telemedicine. The way we approached this problem is somehow similar with telemedicine. That has also provided me an inspiration. At that time the research, when we contacted studies on telemedicine and medicine as well later on, after mobile phone based medical services also, that was one of our research areas.

00:37:00

The telemedicine and the tele mobile studies we conducted during our PHD studies is also a knowledge area that provided me ample understanding about what's going on in our area and how our communities are using mobile phones. We know the penetration rate of mobile phones and how the mobile phone network is spread out through the country and the ease of use related to mobile phones. All these things are under our research domain. Like we switched to the study we used to conduct in the health domain, we slightly switched it to the finance.

DM When you're doing your research in this project and you go and ask some recipients of aid and you interview them and you do your research. If I understand, you follow the recipients that the bank is allowing to meet, so you're following their link. When you did your research on telemedicine, did you do the

same? Did you go and see the user of phones of the institution that was doing the telemedicine or did you find people to interview outside the institution? How did you do this?

GM The telemedicine system in our community, the model of telemedicine, the early adoption was usually meant to exchange information between the senior medical professional and the junior medical professional.

DM So it was between doctors, it was not between doctors and their clients?

00:39:07

GM Usually it's between doctors. It's a platform. Most senior physicians are stationed in Addis Ababa. We have a university medical hospital as well, a faculty of medicine, where you'll find senior physicians in this hospital. This is our core telemedicine centre. The national telemedicine centre is based in Addis Ababa. They call it Black Lion Hospital. That is the case area.

Then we have a number of regional hospitals, rural hospitals connected to Addis Ababa University, as well as some Addis Ababa universities also connected to John Hopkins University in the United States and with some hospitals in India. Usually, the senior and the junior medical professionals are expected to exchange patient records. The senior medical professionals are expected to comment, provide medical opinions to junior professionals who are close to the patient, without relocating patients. That's the initial idea of the platform.

DM For this project you went at another level of engagement with the community because you went directly to the user of the microfinance products, so you went at a different level of meeting. You interviewed people who are actually users of the product. Am I right?

GM Yes, in this case beneficiaries, end-users. The beneficiaries are those who borrowed money either from the bank or financial institutions.

DM I forgot to ask you that before. We're halfway through our conversation. Would you like to have a ten-minute break and do it for another 45 minutes? Would that help?

GM Yes, let me take water.

DM What about we meet at, it's almost 9.50, so we meet at 10? Is that okay?

GM Yes.

DM So in 10 minutes.

GM Okay, fine.

DM Very nice to see you. Stop the recording.

00:42:04

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Speaker Key:

DM Dr Dominique Marshall

GM Dr Getachew Mengesha

00:00:03

DM Hi. You've changed positions.

GM Yes.

DM I'm still in front of my window. It's the beginning of a very cold day in Ottawa. I have little bird flying about in the tree there so it's a nice distraction. We were talking about your relationship with that bank and the community behind it. And what you knew about the use of cell phones in telemedicine areas helped you think about the connection between that technology and banking for women in rural areas. That was all very interesting.

Now I wanted to ask you more about your discipline. You do information technology, so you were trained. Is it a branch of engineering in your place? What is information technology? What's your discipline?

GM Information technology is now branching out from computer science. In information technology what we do is we extensively explore the business environment, the business problem, and seek technology solutions. That's why it's a social-technical discipline.

00:01:44

DM My question there is about your project and your discipline. You've already told me how the organisation of the team that you were part of when you did your research in 2010 has changed and now it's a different team. If you think about your discipline, information technology, and the way you're conducting your project and the way you were working in the past, can you talk to me about the meeting of disciplines around that problem?

Explain to me how in your head different disciplines contribute to what you've been doing and maybe how that has changed over time in your understanding of interdisciplinarity.

GM Interdisciplinarity has a critical role in our preceding research as well. If you start with the 2010 research, our professor is a scholar in machine learning, so her machine learning and business analytics knowledge is very critical. One of the other research team, his background is in accounting, so his knowledge of

accountancy and finance is also very helpful. As a PHD student, that was my core area of research.

00:03:22

I have taken a course on machine learning. I also have a background in technology, because my second degree is also a master's degree in the information technology domain, so that helped me to easily engage in machine learning research in the domain of finance. The domain knowledge is helpful. The knowledge we got from the accountant and finance expert was helpful.

In the current research we have members from software engineering especially. His area is human machine interaction. He is very good at user interface design. He has published a lot of things in coming up with very easy to use user interfaces. His knowledge in human-computer interaction is very critical. The other member is from psychology. He has brought very good theories in social psychology.

We used Albert Bandura's theory of social cognitive theory. That social cognitive theory helped us how the human behaviour is shared, considering the internal and external factors. We ended up with a very good study area. Now as part of this project we're conducting a survey on women entrepreneurial self-efficacy. This is as a result of the insights we've drawn from social cognitive theory. That's what we got from the social psychology professional.

00:05:34

The other team members are from information systems. They are very close to the domain of information technology. They're also very good at conducting their systems analysis and design. They are trained in that area. They know how to identify problems, how to translate business problems into a technology solution. That's why all team members have relevant contributions at this stage.

DM That's very interesting. Here is my next question. There are two things here I want you to think more about. First of all, you're telling me your discipline is evolving and is branching out of information technology. The configuration of interdisciplinarity seems to be evolving in your own institution and in your discipline, but then there is this project and what you're trying in this project.

Maybe my first question is the putting together of this extraordinary team of yours, is it a configuration of disciplines that existed before or did you try something new in that project?

GM We have as an ongoing project, for instance, we have a thematic research project funded by the university. For three of us from our current research team, the social psychologist and the software engineer and myself, we have another project on social media, exploring the psychosocial, political and the technological issues related with the use of social media.

DM Very nice.

GM We are conducting that, the three of us. Also, this is our second project. In this gender design project, we added four women to our existing research team.

DM And the four women, are they mirroring your three disciplines, or, as you were bringing these women, did you bring other disciplines in as well?

00:08:31

GM Three of them are in the same discipline, information systems, but their interest area is different. Some of them are very interested in the software engineering aspect. Some are interested in API, application interface design. Some of them are interested in database management related areas. Although they are usually in the information systems domain area, they have varying research interests.

DM You've been working at this for, if we count the [unclear] paper, almost two years. Have you, as you were applying yourself to this project, discovered things about the contribution of disciplines, or are you just consolidating what you already knew?

GM We are learning new things in every project. Like I said earlier, the social media dimension, from the domain knowledge we have got entirely different insight from the ongoing research. For instance, in the preface in the social media domain, we were exploring issues related with the abuse of social media, like internet addiction. Although the domain is a psychology and behaviour domain, the issues raised with internet addiction, misinformation, disinformation and related issues, are entirely different from the current gender design.

Here we are discussing the use of technology, usually 100% for human good. In that area we see the technology extensively used for malpractices. The lessons we are getting is entirely, even though the social psychology behaviour theory we are considering is entirely different.

00:11:35

DM You do have to leave in 20 minutes, am I right? Can we stay a bit longer? Because I'm going to time what I'm asking you.

GM We can go up to an additional 35 minutes.

DM Another 35 minutes? Great. We could finish at quarter to is what you're saying, or 20 to? Thank you so much for that. In your research on social media with a similar core, the question of gender is not prominent. Is it there somewhere?

GM That is the issue of gender is not prominent.

DM Not prominent. It's there but as any other question.

GM Gender has nothing to do with that use and abuse.

DM So in your 2010 research for your PHD, did you think about gender there?

GM We haven't considered that, no. Gender was out of the question at that time as well.

DM Am I right to say that this is the first time that you really put gender right in the middle of what you're researching?

GM Exactly. This is a new experience for us.

00:13:02

DM Let me ask you what about how you think about questions of men and women and families and children, how you thought about it when you entered this, and how now that you're doing this, is your idea of it strengthening, changing? Talk to me about this, how you see this issue. You already talked a lot in your history of your project around how you understood the place of women in your culture.

Could you stop and talk only about this, how you thought about these issues when you entered this project, and are these ideas consolidated, getting richer, different and all that?

GM The gender design research for us is entirely a new experience, because here in the political and mass media we hear gender related issues. We consider it more of a political rhetoric. Because we used to run differential treatment of women and girls and boys in our school with so-called affirmative action. That yielded a bad connotation, considering women as inferior. We have a bad track record with affirmative action.

Even later on, as this affirmative action was running, even the girls in our schools and universities were hesitant to attend tutorial sessions arranged with the affirmative action schemes, because they're labelled as inferior. Even the government reduced certain margins for entrance exams, for instance. Let's say if a woman scores, if the cut off point for university entrance is 70%, for women it's reduced to 65%, for boys 70 or above, so have this differential treatment.

00:15:34

Anyway, what we observed in this process is some negative connotations attached to it, negative labels attached to it. But with this exercise, our philosophy, the gender design, the gender innovations we considered as our lens, is more participatory design, inclusiveness. We are not designing a product which is very unique to women. What we are now intending to do is to make the technology simple and fair and easily accessible to women.

In the entire research process, women need to be represented as researchers. Instead of conducting research related to gender in a male dominant environment, women researchers are better positioned to know about the pains and social realities in our community. That provided us a very good insight. At the beginning the idea, conceptualising gender design was very difficult.

We spent a considerable amount of time coming up with conceptual clarity of gender design because of the negative connotations attached to it. Particularly the initial phase, the first inception workshop, a two-day inception workshop we conducted involving a domain expert, and the literature that we got from the lab sessions, especially on gender innovation, we reviewed a paper by Schiebinger.

That provided us a very good insight to clarify the concept. This an entirely new phenomenon for us, a new exercise, and it has already shaped our view and perspective. Certainly, when we will conduct the next research, we will view gender related issues differently. We normally consider it as political rhetoric.

00:18:23

DM If I understand you well, it's as you were trying to elucidate that concept, especially through interactions with the program and the workshop and all that, that you saw that speaking about gender meant talking about society in a way that gave access to the knowledge that sometimes women are closer to, that's what you're saying, is it?

That it's not just about women, but it's about designing things that sometimes are more inclusive, especially because women might be closer to the social knowledge that you need to collect. Is that what you're saying?

GM Yes, ensuring inclusiveness in all human activities. We consider research as one human activity. Designing a computer solution, a computer program is one human activity. For instance, in our domain, we call app, application. An app has a connotation, a masculine connotation. This is some of the things you see behind the scenes. Annoyingly, when we refer, we call app, what comes to our mind, and the students we asked as part of this research, when we say, app, which gender are you referring to? Is it male or female?

Definitely it's associated with the male gender. We have this misconception and mislabelling, probably due to the culture. Making technology solutions gender neutral may not be possible for various reasons. As much as possible what we did is to take a perspective of inclusiveness, ensuring inclusiveness in all processes. If it is research, through the research process, women need to contribute.

00:20:41

This is one area of knowledge generation. It's actually based on the insight we got from Schiebinger's paper. Her paper is in our domain, technology. I think she did great in terms of bringing the gender analysis framework into the domain of science and technology. So, fixing number related issues, fixing institutional related issues are partly addressed by other domains and studies conducted so far in a gender related domain.

But knowledge related issues, especially in terms of providing equal access to women and men in the science and technology domain, is a new phenomenon for us. We used that position as well.

DM I asked you the question of gender and then you immediately talked about design. This is good for me because the next thing I wanted to ask you is about design and design methodologies and the role of making, because you are in the stream too, you are actually doing a prototype. So, what is the role of making in that project and has your idea about making things and designing things changed or has it become better in some directions? Is it something you're trying here that you had not tried before?

GM When we make things, especially when we develop technology artifacts, there are well-established procedures. There is a conventional procedure, systems analysis and design, where requirements are gathered. These requirements are the foundation for design. They guide construction.

00:22:56

Now, here, particularly in the process of eliciting requirements, requirements are usually gathered from end users. End users are not considered at the requirement identification phase. The solution's end product, the technology artefact that emerges in the process, may not meet the need or requirements of the end users. That's a general assumption.

In this case, even when we compared our conventional process of systems analysis and design, even the methodology advocates that as much as possible to approach users, integrate with users, get information from the users. Based on that information, develop a product. That process, this makes end users passive information deliverers. They provide information.

In this approach what we noted is where the end users were women, they have to be a co-designer. Instead of switching from passive information provider, becoming a core developer, a core designer. This is our perspective. As you can see, we have added something in our ongoing conventional process of making an artefact.

DM Are you coming to the workshop at the end of this week on prototyping?

GM Yes, we have submitted something. We have to attend.

DM Are you going to be there or is it another member of your team?

GM Other members will join us as well.

DM But you'll be there?

GM Yes, I'll be there.

00:25:17

DM That's great. I'm looking forward to, because what you're saying there will be really interesting to see and elaborate on over there. That's really interesting. Thank you very much for your answer on this, for the distinction between how you generally work. It's not completely different, but there's an added dimension and a way of experimenting that is part of that project.

A different question but linked to a lot of what you've said, I wanted you to stop and speak about over the last year and a half, your interactions with this program. You spoke about the workshops. You spoke about filling the forms for the first application and the second one. You spoke about reading the stuff for the inception workshop. You're coming to this one.

Could you tell me in general when and how, maybe with your encounters with Emmanuel Mutungi, maybe what you encountered if you had one with Mika

Westerlund [?], like the sector experts. Where and how the actual interactions with the program have been constructive, useful, not useful.

GM In general I found the interaction very useful. They're a well organised research program. Our request, especially if you take people like Kerry [?], instantly we make a request and instantly we get feedback.

00:27:04

It's a very supportive, well organised research. We have another research project, usually I haven't not seen a well organised and supportive research team like this one. That's why, as you can see now, step by step, if we take the four lab sessions, gender design, at that time the conceptual clarity was a problem in most all of the research projects. The operational definition we coined for gender design is actually taken from the mirror board.

The interactions through the mirror board were phenomenal. Really, that was a new experience for us as well. We got very good exercise through the mirror board. We have frequently been referring back to the mirror board through the project. The first workshop session was also helpful. Without that session it's very difficult for us to get acquainted with the very good publications like Schiebinger's paper on gender and innovation.

Throughout the process I am happy. But I haven't had much interaction with Emmanuel. I don't know. Anyway, he may be remotely reviewing our reports. I met with him probably in the first two workshops. Otherwise, I haven't had much interaction. The interaction may probably not be desirable if things are clear. Maybe if things are moving smoothly, interacting there with him may not be desired.

Otherwise, what we have seen so far is very nice. Things are going smoothly and it's a very good experience. If you continue the same, if you manage your projects similarly, that would be fantastic. Keep it up.

00:29:58

DM Very nice to hear. Do you have any expectation for the forthcoming virtual exhibit? Maybe you didn't think about that much, but we're going to finish this part of the project by showcasing what's happened in a virtual exhibit. Are there any things that at this point you can envisage that would make that exhibit interesting or helpful, or are you not there yet in your idea of the coming months?

GM Are you referring to the virtual exhibit or the prototype session?

DM No, the prototype session is at the end of this week. But at the very end of the program, maybe you don't know this, we will take what each project has done and showcase it on a website exhibit, where we will present the 20 adventures as an outcome of this common endeavour. Now, if you've not thought about it that's totally fine, we can skip that on altogether. But if you already have an idea on how and if it might be useful, I'd be happy to hear.

GM I've heard it for the first time. I have no idea about this virtual exhibit. We were informed about the prototyping session.

DM Now we have another ten minutes or so. What I would like you to talk about is the future. When this cycle of this project finishes for you, here the program will finish in about a year and a few weeks from now. At this end we do not have at all an idea of what we're doing next or if we ever do something next in this shape.

00:32:03

We were given that money from IDRC to find and organise a group of scientists who would be interested in exploring these questions of gender design. At this end, and probably at your end, you're thinking about is it worth carrying in some direction? What are the productive things that have been built here that might be encouraged? How can we sustain this? Do we just close it down and make sure that everyone is fine in their own places? Do we try to promote some aspects of it and maybe strengthen some aspects of it?

I'm wanting to hear you really dream here of what might be interesting at many levels with this adventure in the future.

GM Through this process we've gone through so far, what I noted is gender innovation and gender design needs to be considered as an ongoing global movement. Addressing it through one research project will be difficult. Like I said, it's still theorising in this area, bringing about conceptual clarity is very important. The idea of even the core design paradigm, our participatory design paradigm, needs to take a new avenue in this. This is probably also an issue of participatory design. It's not an entirely new concept.

But this process is now taking a different line, a different direction. Bringing about conceptual clarity requires additional research, additional lines of study and enquiry. Working in this area again will be rewarding. It will be an important contribution for a global movement of bringing about gender equality in the entire human activities, including research and economic environment, empowerment, financial whatever.

00:35:03

It's a very broad area. This has shown something, it's sparked something, but it's premature at this point. Otherwise, the area we lack is conceptual clarity. Some publication may emerge. If there is no additional subsequent research endeavours, probably our publication may end up distorting the existing knowledge. That's my opinion.

DM Your own journey towards more clarification of these concepts, do you think that will help you teach this or write about it, or, for you, has this got in your own publication now, that will you seek that kind of elucidation to try to work in that direction or are you waiting for others to do that?

GM Probably the research, this study, we will come up with different publications, that's what we envision. Some of them may be on women, self-efficacy. The other is gender design. This is, in our domain, probably participatory design is normally computer science and software engineering and information technology domain. But gendered design related issues are not well addressed.

Like I said, that's why the connotation of providing even most of the applications or the artefacts being designed are not gender neutral at least. Like I said earlier, what we call app, the term app also has a connotation, a masculine type of connotation.

00:37:28

The idea of gender design in computer science, for instance, in the future, gender design in IT, gender design in software engineering. It's going to be interesting research. We'll probably write a book chapter, gender design in computer science, gender design in software engineering, gender design in information systems. That's going to be a very good contribution. I haven't read any work related to this.

DM That's very interesting. It's good also to see where and how we might be able to facilitate some of that more theoretical reflection and in application in different disciplines. If I hear you well, one of the things that you think, because we're thinking what could we do at this end, you think that the organisational, the shell that we put together, this was actually supportive.

Because we're thinking at this end where is it that we might have made a difference and helped support things in these 20 projects that might be sustained or reinvented or should we just shut it down and think of other things and other directions. It's good to know this. Is there anything else you would like to say, I know I've asked all sorts of questions, that I haven't touched upon that you might want to add about any of these things or something else?

GM I think that's probably from your side in the future if we're going to publish something. From our side some research outputs are emerging. If we publish on our own, we have another six or seven research teams, disregarding our partners from the side of Canada, that is going to be unfair. There are some interested individuals.

00:39:52

In the earlier meeting we have discovered one guy who is interested to publish with us in the women entrepreneurial self-efficacy study. That survey is ongoing. We are conducting the survey, probably after collecting the data and analysing it we may write an article.

DM Who is that person? Do you remember?

GM I've got his name. Probably I've captured his name.

DM A Canadian fellow?

GM Yes, he's Canadian.

DM It's not me? That's good. So, you have possible work together after or publication together after?

GM Yes, it's possible. Otherwise, we can publish our friend more.

DM If you ever have any difficulties or hesitation thinking about to what extent you can do your own stuff, we can discuss that later. You can discuss that with Emmanuel or with the team. This is another discussion. In general, we're not jealous of any of this at all, but we want to facilitate this and maybe sometimes support it.

00:41:25

You can make another call on these things. I'm finished there. If you have nothing else to say, I'll stop the recording, and then I want to tell you something about Ethiopia.

00:41:40



GENDERED
DESIGN IN
STEAM

ID53 - A case study of clothing design considerations of low-income, menopausal women in Brazil

Interview transcript

Interviewee:

Érica Neves | Principal Investigator

Universidade Estadual Paulista (UNESP)

Interviewer:

Chiara Del Gaudio | GDS Investigator

Carleton University

Date of interview:

20 October 2021

Transcribed by:

Independent contractor

ID53 - A case study of clothing design considerations of low-income, menopausal women in Brazil

Recording time: 1:09:53

Interviewer: **Chiara Del Gaudio**

Interviewee: **Érica Neves**

Interviewer: [Excerpt in English] Okay, perfect, but for the interview we can speak in Portuguese, because we think it will not only be easier, but we will be able to say things that in English, the idea, actually express ourselves, also choose words that are from our language, etc. So, my question is, could you tell me the history of your project? That's my question, and you can talk as much as you want, start wherever you want, that's it.

Interviewee: In fact, the history of the project started, it is actually in development, the realization of an idea that started when I did my bachelor's degree. My bachelor's degree was in fashion design, and at that time while, this was in 2008, in the year 2008, at that time, when we talked about fashion, Brazil was still very... it was more, even today, you know, it's easier for you to produce for younger girls with younger bodies, and there was a, I can't remember, I won't be able to remember the name, I can even get it later, he had, he was a philosopher, a British anthropologist who started using the term alpha women, who were women who were reaching a, a, a certain age, forty-five, fifty years of age, and that they were freeing themselves, right, financially from that guy, let's say that guy, the children needing her financially, and they were starting to have their own money and take care of themselves and see that reaching forty-five, fifty is nothing like being old in the old days. You get there with an autonomy and financial independence that allows you, that doesn't necessarily need to be very big, but that you start to have other priorities and focus on yourself, also a little bit from this gender movement itself, you know, from equality, from women wanting, just a minute, there is that annulment of the woman by the family, and there is a time when she can achieve a recovery as to that. I did my undergraduate thesis on that subject, of alpha women. So, they were clothes for women above 45 years old and I developed them, but it was an undergraduate paper, only with a bibliographic review, I had no data. When I started my first studies as a student, I wasn't even doing my master's degree. I joined to take some classes in the program. I realized that, during my undergraduate thesis, I heard a lot of women commenting, my mother's friends, my mother, and they talked a lot about the body, and the relationship they had with fashion, which was a relationship that changed a lot, and they complained a lot that, then, the fad... Chiara, would you like to film, would you like to record? Because then you can retrieve it.

Interviewer: I think I'm recording here. I'm just taking notes because Dominique speaks, she always takes notes, because some things can happen with the recording.

Interviewee: No, as I'm a researcher, I therefore know how difficult it is for us to write everything down.

Interviewer: No, but I'm trying, she did it so I'll manage to do it [Laughter] I don't know, thanks, I'm writing everything down.

Interviewee: But feel free to record.

Interviewer: I'm recording too, but she's taking notes for safety's sake [Laughter].

Interviewee: Fine [Laughter]. And they complained a lot about that, and mostly because they couldn't find clothes that they... They felt some changes to their bodies and wore clothes to shape, to try to shape themselves, because not all of them were in favour of embracing medicine or hormonal treatments, so not all of them wanted to inject hormones, because even today there are uncertainties about it. Some already suffered from having removed either an ovary where there is a lower incidence of hormones, or the uterus itself, or already had some problems for which they had to resort to surgeries and remove organs that were part of a woman's endocrine or reproductive system. Then I exclaimed, wow, these women, this woman is growing up so much and has no education to say who this woman is. Fashion focuses on specific points, but does not deal with it, this issue of ergonomics being examined based on the transformations of the body was missing a lot, you know. So, well, what comfort, emotional state, what emotional characteristics does the product bring for... They are observed, perceived by these women. Then, in the master's degree, I did an enormous survey. The written part was even enormous, about what the menopause is, because until then we were, I was a designer, then I was an architect, I needed to study medicine, right [Laughter], study a little to find out. I did a study. I discovered that it helped me a lot to do my questionnaire, and I did the questionnaire online, online and I also delivered some by hand, and the women answered. In all, if I'm not mistaken, one hundred and fifty-four women answered. I did a drawing of the body. I'm even using again this outline that I made now in our one that we are putting forward, but my niche ended up reaching women with a higher social class, so where they, some were already retiring, they already had money, they already had education. So, there was a certain relationship of power in relation to both the purchase and the actual understanding of clothes. What we got was very interesting, because we saw, I asked two questions at the beginning of the questionnaire and at the end. The two questions had the same meaning. I only changed the way of asking, which was for them to tell me if they found clothes on the market for them that satisfied them. At the beginning, most answered yes. When I started to question it, but this, but that, at the end, I asked the same question, only with different wording, ninety-six per cent said they couldn't find any. So, when I got them to reflect on their relationship, they saw that they were adapting to the product, and when I started to question it, they saw that no, they really don't have any. At the time, there was a fashion for very low waists, very tight clothes that sometimes made them uncomfortable with their body, with a certain level of embarrassment. So, it was very interesting. Then I published it, I did my part, but there was still that little thing, like ok, I reached women in a more favourable financial situation, and I wanted to come back, right, to question, but on a more stereotyped aspect concerning women who didn't have so much, let's say, prominence financially, let's think in that way, but when I did my PhD I shifted to the elderly. I ended up shifting to all the biomechanics of the elderly, at the end of the... Finishing the last year of my PhD, I spent a year in Portugal. Some comments of the open questions by these more elderly women have a close relationship with this body thing, and what was fashionable for them, and it rekindled in me this questioning again. It was the [older] women who cannot invest, women, like the... like those poorer menopausal women, how are they feeling about the product. And then I saw this opportunity when I saw the call. Man, Gender Design here

in Brazil, despite being something, a word that when you say it, everyone can say that they work with it, don't work with it. I think that design, especially within our graduate program, especially ergonomics, is bringing a characteristic of you focusing on the user a lot, and not just on the product. So, we focus our research with data itself to find out who these people are, and we link them now, and increasingly linking scientific data with emotion and with the economic part of the body. So, you need to feel comfortable, you need to feel represented because clothing, in this case, is an identification tool. It is a non-verbal communication tool. I say non-verbal based on the product per se. Of course, if you put on a t-shirt with writing, you know, a message becomes verbal, but I mean, a colour, a model, a style, and elements that end up being linked by stereotypes formed within a society, so now... So, when I had the opportunity to do this study, and as the pandemic delayed my life in relation to data collection and that situation I commented on before briefly, I managed to delve a little deeper into this issue of stereotypes and perception formation. So, I think that in this way, more than talking about the gender issue in this research, I am highlighting what the woman, what I also want to highlight is what, what the stereotype of women is, right, what this menopausal, low-income woman, what the stereotype that she sees of herself is, how she, what is the, how does she see herself? So, the questionnaire is ready, which I want to see. Now in Brazil, we are already going to the third round of the vaccine for these older women. So, I intend to do the questionnaire now directly. I changed, Chiara, we actually reduced the number. I made a form, followed your instructions. They are really subjective questions, let them speak. Of course, there is some quantitative identification data that I will need, because, for example, to identify whether they are in the climacteric or menopause, for me to identify their social class. It is data that I need in order to characterize. I'm even forgetting my Portuguese, to characterize this sample. So, there really is some quantitative data, right, which will be the basis of the research, but there are a lot of open, well-structured questions, so much so that the questionnaire even ended up a little long, but as we reduced it to a lot fewer women, we will do at most ten women, at the most, maximum of ten women. I didn't limit myself to just a specific number of questions, which can generate a lot of data, but in order for them to be able to shed light well on what we are studying. I think it turned out very good. Afterwards, I'll even show it to you. I'm joining the ethics committee here this week, because here everything goes through the ethics committee. I'll [show] you... it's still in Portuguese, but I think it's okay, you know? I can send it... so, so that we, when I'm done. I'll send it to you, you can give your feedback, we still have to fix it, because now I'm going to send it to SEPE, which is what we call the ethics committee, which we always go through when involving human beings, and as we are coming out of a pandemic, God willing, it is already near the end, events have already started here, thank God we are here at home, my parents are already about to get the third dose. So, I was very afraid of getting it, my mother got it after all, you know, but my father has high blood pressure, so I'm a little afraid, he has a heart condition, so I'm a little afraid. So, I think everything will be ok. So, I want to send it to you and I would like your feedback, please, especially since I see that you have expertise in this area of subjective questions, which is pretty cool, so I find it very interesting. And, in this way, I think it was that, you know. I think my project will be top notch, you know, it is very cool. We are going to touch on a subject that is still a little bit of a taboo, because, here in Brazil, there is a stereotyped characteristic that a woman who defends or imposes herself ends up being seen as bad. Either she is very angry, or she is lesbian, gay. I know why I suffer a little from this, because I am very forward, in this way. I break some taboos,

you know, and I know how it is. So, for me it will be very interesting, not for me, for us on the team. I think it will be very interesting to see, give voice to this woman, because it is very easy for you to give it to a woman who already has a certain contribution, big financial support. Now these women, who are they, how is the job market for them? What is fashion for them? Do they see fashion as something impossible to achieve? It shouldn't be. It's like I said, you can have a notion of a person by their impression and by the way they dress, I think it's that.

Interviewer: You mentioned something about, I think it was during your undergraduate thesis that you heard your mother, your mother's friends about the body issue, this issue. What is the relationship of this project with your personal life? Do you have any, personal or professional, do you have any relationship or do you want to tell me about this...? Yes, do you want to tell me a little about this relationship?

Interviewee: I can tell you, I don't... First regarding professional relationship, although I have moved on to design, graphic design, design as a whole of a product and architecture, which I bring together, which I also end up, professionally I am an architect and academically, because I am coordinating a course on architecture and design, fashion. Every time I said that I researched fashion, I think people don't give it importance because, both because of marketing and labour issues, because mainly Brazilian fashion is responsible for a large sector of commerce, a very large sector of commerce, and many times people do not see the scientific side within fashion, whether fashion as an element of study, as an object of study of anthropology, sociology, and now gender design. So, for me it has been very important within my professional relationship, mainly academic. I'm talking about the professional now, you know, the professional side, because I'm managing to instill a maturity, break a stereotype of fashion itself within the scientific field, how important it is for individuals. In this case, I think I discovered target audiences who to this day that I studied, target audiences who were neglected for a long time, the target audience being, the older woman, the elderly. And now coming back with the older woman and with an even more exponential factor, this being women who are, are not heard. These women are not heard, either by the market or by marketing. They are not, they are not heard. So, it will be very important for me, I think that even for ego, maybe a little bit also that love that we have. That is where the people come in, because for me fashion is very important like that. It's not that fashion that I mean, Chiara, from the Hannover catwalk show, no, it's fashion as an element that makes up who you are. Fashion even, what it is, you know, how do you feel better? So, we have several, we take history. Fashion has always been linked with historical evolution, whether to show wealth, or to show social position, whatever. Because it's more the women. Let's suppose you wear heels, those things hurt like hell and you wear heels because you feel more beautiful, you feel more powerful. So, fashion is much more than an outfit that you buy, spend on and hang in the closet. It becomes an element, and I saw how much for these women when I started to study, especially these women in the menopause. As a result of education, as a result of social education, of opinion, of ideologies, of stereotypes, there is a lot of pressure, there is a lot of pressure, because even if there is a self, a great appreciation, an excessive focus on younger human beings, on younger women, unlike in the west, you know, where you have a western culture in which you have a greater appreciation for the elderly individual. And I saw how much they got, I think that the coolest part of my survey, how they got excited and how happy they were

to be able to talk, you know, wow, it's true, you go to the market, wow. This here shows it, in this respect it passes, they joked, no, they didn't joke, they talked, to this day they say that they were all clothes for Chinese women, because Chinese women have a... They have a smaller, body makeup, size, let's think like that. And then they would go to the store and get like a thirty-eight, which is a size forty, which is a reasonable size for a normal human being, and it didn't fit, you know. So, it was very interesting to hear them, this emotional issue itself, you know. What, wow, the person is listening to me, you know. I had never thought about it, and look, it's true. And to this day, everyone I have more contact with, everyone says, you know, Erica's work was really cool. Really, the market, it is funny that... It's not is if they took hold of my paper and read it, imagine, not at all, but for example, they started to raise waistlines of pants, lingerie started to come in various sizes, the XL size started to become natural, like, and then she wears L like a hottie, you know [Laughing]. So, it ended up that it coincided with the evolution of society, the actual evolution of women, of this woman's position, of this questioning of who she is. It ended up converging, you know. Before I remember that you went into stores like department stores, C&A. Here we have Renner, we even have Forever 21, but I mean these more Brazilian ones, let's think like that, which feature the nature of use. So, C&A, Renner, Riachuelo, it was just girls, it was just girls and younger women, not nowadays. In the department stores themselves there are segmentations, internal brands, the brand itself. So, there is [a selection], you know, for pregnant women, there is [a selection] for older women, there. So, the options for women have increased a lot, but you see the prices. They are high prices, such that for a woman who is in the low class, pants with a higher cut for you to work, for you to... they cost BRL 100. The salary in Brazil is, the minimum salary in Brazil is around BRL 800 [a month], so a quarter of your salary to buy pants that will fit you well. It's not an option for a woman, so, well, we have an improvement in fashion. We have an improvement in this sense of modelling, but it is still fashion that is still choosing for whom it is. It is still very targeted to those who have purchasing power, so to speak, the same thing as saying that modelling of clothes and fabrics and good trims, they are associated with those who have money, and those who don't have it don't deserve them; they really deserve a tight-fitting outfit, they are cheaper.

Interviewer: Have you already had contact with these women, these local people, this community that you are seeking, in which you are seeking to work or ask these questions? How was it as to the process, what will it be like?

Interviewee: I had right at the beginning, which were actually centres that I took care of... It was a church that people around me, I'm not the one who goes to it, but it's a church where, they live in a settlement and this church embraces these faithful, these coreligionists as they say, and there are a lot of these women there. I didn't want to go in with questions on the subject, so as not to invalidate the sample or otherwise. Let's say, I didn't want to prep them, because I wanted them to speak up there at that moment, so I didn't want them to study or otherwise. I wanted them raw, you know? Then the pandemic happened. Everything was suspended, and I couldn't go to any more to these meeting places that belonged to the church. And, another centre that I had was, in fact, it is a day care centre that some women, including my mother, work as a catering volunteer at once a week, for these children, and the mothers go together or grandmothers. So, it was also where I had a part of the women, where until then I was

seeing seventy women, and it was a second part. But, in fact, the church is resuming its activities, so soon I'll be able to get in touch with them. I've even talked to the people, the people who connected me to them. And the day care centre ended up not opening up yet. They are only doing closed boxes, you know, for food aid, so it often ends up that it is no longer women who pick them up. It ends up being the husbands, or the children themselves, because they are boxes, and then they go by car, or even by public transportation and everything else. And as I said, I was cautious, you know, until about twenty days ago, because everything I told you about ended a month or so ago. So, I was in isolation, you know, so I was just, the church people still hadn't come back, and now that the city government here, we are all resuming activities. That's why I even postponed the survey a little with fear, you know, because I want to focus on these church people, especially these people. They are very needy, they are very needy, you know, they need, we have to help or not have... a very interesting thing about this church is that they help financially, even at home, you know, so for me I think it will be very interesting to understand who these women are, so I'm already...

Interviewer: Do you think that [...] see the relevance of the project, but I think that also in the conversation they will benefit from it, what do you think about it?

Interviewee: I think that a lot, because as, I think this way, every time I have got to do these types of interview, of approach, at first, it's very closed. They are very afraid of the answer. That's why I always play like this, not objective, the quantitative at first, because then they end up like this, yes, no, then they become familiar. I break the ice a little, like, I talk a little and they open up. So, that's why you'll see that, especially in the beginning, the questions are more quantitative, and in the end, they are more qualitative, which is when I let them speak, and I think that this... I'm going to ask some questions, mainly regarding the coexistence of what they are doing at home and work that maybe no one has ever asked. So, maybe I think there will be self-reflection there. I was once talking about this survey with... We were in one of these groups, on Meets, it wasn't ours, it was from another university, and the person's question was just right, you know, because the question was, but hey these people are sometimes not versed. They have never carried out a self-reflection, how are you going to manage that. So, I said this, well, you always have to have a first time, so that's why the questions there that you will see in the questionnaire will not always have an answer, I reckon, but I made a sequence. I think I'll try, as you said, you're not getting some questions out of me based on how I'm talking. We create a certain, we read for this, we create a certain ability to disarm the person. And bringing about these reflections, and I joke that I said, if I manage to talk to the elderly Portuguese and I get very interesting data, Brazilians are very easy to talk to, Brazilians, this is a very good thing about our people, they are a people who open up very easily. I think I'll be able to answer your question, I'll tell you, I swear, you know. I think in the graduate program, because for me too I think there's still, as it will be the first time, I think there will still be a question mark like this, a little question mark that I think I still need to experience to get out of this theory that I'm trying to verbalize, because it is one thing for us to imagine inside the theory, it is another thing when we are there involved. And these women, often they don't have anyone to talk to. They don't have psychological support like many would have. I see that this can lead to an easier conversation I think, a more positive reflection and, who knows, tantalize them a little bit regarding what they themselves are seeing as a woman, because they felt more valued,

when you give someone space to listen to you. You feel valued, that is, any psychological theory, any sociological theorist can prove that.

Interviewer: You mentioned that you changed this scenario a little, etc., so you changed a little bit to the limit, both yours, the subject of engaging, and promoting this engagement, this participation of theirs. So, I wanted to understand a little bit about what the initial idea was, and also how you tried to make this process like... but inclusive from a gender point of view, but I don't know if it's also more personal, because it can even be from different perspectives maybe, go beyond the quantitative, whether in the way of approaching the person. So, I wanted to know a bit about this?

Interviewee: I think that initially I was very stiff regarding numbers. Here in Brazil we have a... I commented on this. I think that some, some of our workshops, I think I talked about this a little bit, right, that mainly, we sometimes try to bring research closer to biological areas, because, because you create, let's say, more concise data regarding numbers. So, the first thing that was very important was that debate we had, debate not a row, you know, debate of arguments, because I understood that depending, let's say, on the country, right, this type of research that I was wanting to do did not necessarily need numbers. I didn't need numbers, a very large amount, in this case maybe the amount of information obtained will be better than the information obtained in numbers, let's think like this. One question answering seventy, or ten answering seventy questions, inverting it like this, and as I said, as I then had to postpone, you know, delay the survey a little, we also had the problem of the grant, everything, I started snooping, let's say, researching surveys, areas, research in other areas that addressed stereotypes, that addressed a more sociological, more psychological approach, and that's when I started to come across different types of research on this, and that mostly used fewer subjects, and that didn't necessarily use 100 numbers. So, I think, in the first process, I let go of this formula of trying to get closer to the biological ones to try to add volume, you know, to tie the knot. I did research and that no, so, well, for me it was important because I started to mature, you know, which is a maturation, you know, greater maturity in relation to various types of research, and I spent some time researching different types of approaches, different types of research, what we could do, and that's when I started to outline. I took the basis of my master's degree, which had a very positive response, and based on the master's degree questionnaire, I managed, I took the quantitative bases that were important for them, but when you read, you will, you know, gathering more information, I saw that in that first moment, and I said to myself, okay, but I'm not going to... When I also started to study a little more about Gender Design, what was the gender, what was a woman, you are faced with the issue of stereotypes a lot, but stereotypes have two possibilities. They have two ways, which is the one you tend to get as an answer from the human being, from society. So, how does society see me, and how do I see myself, because we are also formed our opinion about ourselves. It also influences what we learn socially within the respective stereotypes, and that's when I came across other research, and I said to myself, no, I first need to understand how this woman sees herself. How am I going to study a product? How am I going to question the use of a product in a certain period of the phase of their life, which is of great transformation of the body. If I understand who she is, if I don't understand how she sees herself, will she see herself as a woman or just as a supporting role who depends on her husband, so much so that there are questions in this regard. Does someone depend on you

financially, or do you depend on someone? You know, so it would be important because I first need to understand how this woman sees herself to outline an idea, to try to set out, to identify a pattern of perception of what she has, of when she is going to use a product, so it's that thing. Design really needs to understand what it is, who it's doing it for, what the society is that it's producing for. So, that's when I tried to bring up a question, but I think it's psychological like that, because my goal was that I don't have to make a product. I have to understand the user to create guidelines to move on to create a product, you know. So, we need the groundwork of data. I joke, I don't joke, I notice this a lot when we get these new classes of students, who don't think about the user. They go straight to the product, to the aesthetics, even if there's that. I say guys, you have to understand first of all, design is not just for those who have money. There is social design, there is design that... Design has to respond to society. Of course, aesthetics is very important, all of this is very essential, but that's not all. Here for example, here in Brazil this week, these last fifteen days have seen a very interesting debate that involved, that I even remembered from our research, which is about the donation to the supply of sanitary pads in municipal schools, because they did, data shows that 63%, I think it was that, 63% of the girls do not go to class every month during their period because they don't have sanitary pads. Our president vetoed that because he said there was none, the bill that was drafted didn't have anywhere to get this money from. Then, what some governments did, everyone saw the movement in the city, so governments, federal, right, state governments, many states, including the Federal District, where he lives, embraced the campaign and drafted a bill because now these municipalities are going to do that. The actual university I work at has a branch in Angola, and such questions have also been making their way from there in the last few months. They were girls who were participating in classes online because of the pandemic, and when it went back to being in person they were not going. Then this questioning started again. We will have that lag with female students again during this period of time because of sanitary pads. And that's the reason for our next campaign, you know, now also focusing on our next campaign. Now it will be the donation of sanitary pads to girls in the municipal network here in our city, from the city next door where the university is. So, look how it is in vogue, you know, how is it like this, design of society, think about refugee girls, for example, do you think that they don't menstruate? They menstruate, so how's that working out? And menstruation is a taboo. Sometimes I see it in my niche like that. I'm going to say something personal, I'm here with the boys or whatever, I say it to their face, you know. Hey, I have cramp, I'm going to be on my period, I'm on my period, I had my period, they look, oh, sorry, I couldn't say that. So, now they don't even care anymore, you know, but I say no, I won't go, then you won't go in the pool? No, I'm on my period, you know, like, they already don't come anymore. That has started to become natural, you know, like, girls menstruate, and what's the problem with people knowing that. It's like PMS. In that case, you can't say, I've got PMS. Stay away, I'll kill someone, you know [Laughing], bring me chocolate.

Interviewer: I liked that, I liked that. So, I noticed that you were touching on several things, issues related to what you are working on, so roles of women, men. This project will also somehow touch on these things, bring together some thoughts on this, also on family, on these dynamics because you were mentioning fashion is connected with everything, that it is a way of being, and allows you to feel one way or another. And I was wondering whether along this process any understanding of either design or the potential

collaboration of other subjects for design has come to light, some with reflection on the different potential of design or collaboration by design with other subjects? Question.

Interviewee: I see a lot of what I'm already studying, ergonomics, wearability, because I'm sure that these women, I don't think they ever thought from this perspective. Another thing I'm going to say, you know, because even when there was this questioning in the research, the person said, no, but what will they know. Sometimes they know, but we think they don't know, because no one has ever asked. I said how many, you see a lot of research with quantitative data, whether you take medicine, whether you take hormones, got pregnant, how many children, but then let them talk. That's where the psychology side comes in, which I think interdisciplinarity because research in the area of sociology and psychology, it leaves questions more open, which even helped me even to set up the questionnaire. I think two, three areas, let's say four, which is design, design itself as a plan, how to identify parameters that will respond to this need, and in the case of the response to this need, there are two factors that we are going to work on, which in this case are the physical, biological and psychological factors of social representation, of social role. So, there are two areas that you, there are three areas, let's say, that you will, I hope, you will see them as very present within the project, you know. And this subordinate research is helping me a lot, so that shows the interdisciplinarity of design itself, you know.

Interviewer: You mentioned something in relation to Covid, not having access to women, etc. What are the challenges that Covid has brought you, or maybe fewer opportunities, I don't know?

Interviewee: The opportunities have been giving me more time to reflect on everything. I think Covid has brought a... Society, we can understand that it goes both ways, those who thought a lot, carried out self-reflection about everything that was happening, about isolation, and about how important it is for you to question some superficial things that society was. Let's take Bauman, Zygmunt Bauman, "The Liquid Society", because he, so, you look to people who really need it. If we suffer in the pandemic, imagine people with less purchasing power. We're thankful, I'm imagining here superficially. We have a house, we have, you know, had internet, for example. I thought at first that they all had internet, ah, they must all have 4G, everyone, who knows, most even had 4G, but I didn't know how to use technology. So, I started to try, no, but what if we did it through Meet, if we did it through Zoom. I didn't know how to use it, many didn't want to depend on their son or husband, or nephew, oh, no. Then I'll have to keep asking so-and-so, and so-and-so is annoying. Then I saw that something that is supposed to be pleasant for them would end up being a very big problem for them. Why, they say that, but why would I learn to use that? Oh, I don't know, that thing of defeat already, you know, like, I don't know how to use it, many of them, despite 4G, didn't have cell phones compatible with these platforms that we use, for example, Zoom, which we are on now, iPad, computer. Thank God I have an iPad, cell phone, computer, because I couldn't access Zoom on the computer, you turn it on with the other. They didn't, often they were very basic cell phones, WhatsApp barely worked, because the WhatsApp even stopped working on some, you know, or some said, oh, but then I'll have to wait for my husband, because he has the cell phone, and then my husband arrives late and then he will think it's bad because, when he watches videos, he rests. So, I saw that I was going to have to change, that that approach, in a way, I was going to try to do it online. In that way, it was going to

cause a lot of difficulty for them. Some said, I'm going to talk on the computer, in the screen, no, and so, I didn't think it was within the scope of our research to try to change that, trying to invade a space for her and talk like that, not because I'll do well in my research, so much so that, I think I even sent a report that you guys answered that, oh, no, but it is from time to time. I answered one before because I was worried, because I said there was no way, Chiara, there was no way I could reach them. Then the interesting thing was to see, you know, that everyone thinks that the internet often solves everything, not technology. There are still many people who don't have access to it. With others, their son used the cell phone to have classes, so, in that case no because, and it's not a quick interview, it will last one, an hour and a half, like our one here in which we are talking. And that's when I stopped, I said, let's take it easy, let's, let's do another type of approach, and now as I have also reduced the number of women, of course we will still take all the care. The people, like what university produced, we have it, it will be an open place, distancing, so much so that if they spend on commuting, let's suppose, you know, they want to go to the university or some journey, in my ethics committee protocol it states that I'll reimburse them for transportation. So, let's suppose it's in a square or an open place, airy, because she doesn't want to do it at home. You take an Uber or public transportation, then it's already subject to free consent that I'll reimburse them, because I know it's important and I, as a researcher, have to do that. And there I am, so I think it was, even in a way I'm trying to give, I don't know if in Canada you do this kind of assimilation which is, have you read Pollyanna's book? It is known worldwide, it is the glad game. Everything she tries to see from the positive side. When I was a girl I read it, so I say I'm going to be Pollyanna and I'm going to try to see the good things, because so much bad stuff has happened this year. I'm trying to take away the good side of the situation. I think I got more mature also as a scientist I think, you know, as a researcher. It's important for you to deal with difficulties, to know how to deal with things. It's important for you to observe how important time in research is, because we determine, we need time to do it. The pandemic did that to us. I think that rush, working in a hurry, the pandemic in a way was a way for us look back at a lot and breathe, breathe and let's take it easy, it's not like that, but we'll find a way.

Interviewer: Do you think you... The future of this project, also of this activity, do you have any idea about it?

Interviewee: I think it's going to be very interesting, I think we'll be surprised because I think, I don't know, Chiara, but I think we'll see how difficult it is for them... a self-reflection from them. So, I think that it will be easy for them to talk about themselves. I think that depending on the women we approach, they will be real fighters who have always tried, who have had to be very rational to support their families, to support their lives. So, I think we there will be some, at least for me, it will be a very different proximity, some information from the unknown. I don't think I can, you know, I'm not going to lie to you. I can't even, nowadays I still can't, if I use it like what I have already done, it will be easy, but I think it will not be easy. We have read other studies, and they talk a lot about how these women are sometimes afraid to externalize because of being hurt by life itself, and like it or not, we are going through, we are just coming out of a period that involved a lot of pain for many people. It transformed the lives of many people, so I don't know what we will find, but it will be very interesting.

Interviewer: Do you think that after this project there will be another one that will mediate on this?

Interviewee: I think we can make even this project bigger, because my sample will be to a great extent to test the questionnaire itself, the methodology, whether it will really work, whether we will be able to achieve it. Everything in science is a surprise until one proves it and I think that later on we can think about trying to bring this research closer to the industry, to the society of production itself, you know? So, what we are going to generate from data and maybe increase that, because I have a really small sample from a city in the interior, you know, but who, for example, is this woman in São Paulo, which is a mega, a metropolis with thousands of women, it's a completely different fight from a fight we have here in the interior of São Paulo, including stereotypes, right? So, I think it would be very interesting to expand this, to make these women and try to include them as opinion leaders, yes, within society, whether as individuals, social roles, but as working women, women who might not work outside the home, but who take care of the house, take care of their children, so, later, with more data, try to take this to the industry more, you know, because the industry focuses more, better on modeling. It's not because you spend less, because it is a mould. You do a proper modeling study and reproduce it *en masse*, you know. I think the industry undervalues this a lot, which is something that is not difficult for you to include. I have already worked in the industry, you know. If you hire a designer, one, you don't need several, a designer who understands body measurements, for example, how is Brazil known? Hourglass figures, they did a survey, surveyed more than fifty thousand. It was SENAI/CETIQ even, from Rio de Janeiro. Flávio Sabrat did it together with the new MPs. The Brazilian woman is no longer an hourglass. The Brazilian woman is rectangular. The Brazilian woman doesn't have a waist anymore, because, this also has a lot to do with fashion, because we have used low-cut pants for so long that when we made a double waist for women... So, you have until the fifties, sixties, until the eighties, an outfit that was defined at the waist. So, women wore clothes that were defined at the waist, lingerie that was defined at the waist, which made this woman more petite, and nowadays we have a more muscular woman, who is inside the gym. So, she results in a bigger body and you wear looser clothes. I'm not invalidating, ok, they're just styles, and the lower waist where we have a very big body change that changed the metrics, the female standard of how a woman is. It came out, the study is already older, so much so that I even used it in my master's degree, but the publications of standards by the ABNT, which is the Brazilian Association of Technical Standards, they are publishing everything now. It's proven. The Brazilian woman is no longer an hourglass. That woman from Vinicius de Moraes, look, such a sight, so beautiful passing by, right, no. She is a strong woman who is changing her body because she is inside the gym and who has worn, for a long time, low-cut pants, pants with modelling that has damaged the woman's body.

Interviewer: The last questions are a little about how the program has influenced, has had a role in your decisions, both the meetings with Raquel and the meetings with other colleagues from Latin America, as well as the more general meetings, I think it's me, in this case. I don't know, is there something that contributed more, but also contributed from different points of view? How did you show this? Do you have any thoughts on it?

Interviewee: It was interesting to observe what I said about the different methodological perspectives. I also observed that I don't go, I don't even remember the names, some,

mainly women, who are the majority, right. It's a certain intolerance of scientific flexibility, you know, that some, or among them or sometimes even directed at me, there was a lot of sharp criticism discrediting me, which was not always constructive, criticism, you know?

Interviewer: By...?

Interviewee: From some other researchers, whose name I don't even remember, but you know, like, wanting, I think there are two types of people wanting to help. Look, do you think that this approach can also help, or, you know, is that right? Scientific and methodological evolution, it is always evolving, it always is, and we are always in an area, which is the area that I see that we still have to embrace, thank God, that we embrace many other areas, so much so that one of the questions you asked me was this. So, we have to be open to that, to mature. I was open, so much so that I totally changed mine. The day you commented to me, the day you talked, you deconstructed in me for us to build another path, but sometimes I realize, like, that a certain, like, that the ego is above scientific research, so this for me was my biggest limit within some standpoints. There was one occasion when one came to question the name menopause, but menopause is a formation, a Greek-Latin composition, you know, I can't change the word, and she wanted to point that out...

Interviewer: Among the colleagues there, that's what I'm understanding.

Interviewee: It was less, and there was, no, it's not like that, and something else, whether we like it or not, sometimes we do a study of a segment, which we have a certain mastery to talk about. So, for example, when the girls pointed out something that I don't know, I'm going to stay... So, right at the beginning I realized that some wanted, they didn't want to contribute. They wanted to question a lot. So, so, this, for me, at first it scared me a little, you know, like, wait a minute, I have a good project, I'm, what's up. Then it was interesting, well, I think that's what I said, that I've matured, because I can defend myself, you know, so this exchange was important, you know, because I sought information to provide more of a basis for our study that is being developed and that I am taking very seriously, because I know, and not because, oh, it's Canada, because it's UNESP [São Paulo State University], no, it is because they are women who deserve our respect. So, before anything else as part of this research, for me, there will be the ethics of considering the human being. So, I was very careful with the questions that we were drafting, so I think I won't lie or even suck up to you, but the ones that you and I did, even Professor Raquel, I looked up some information, yes, but I think what really helped me was the feedback. I'm not going to lie, I'm telling the truth, so there's no reason for me to suck up...

Interviewer: No, it's true, I'm very happy that it's for that. I know that I never know, so it's actually just a contribution, points of view that can make people reflect, but I also think that in essence we don't know anything. In other words, we find out all about this. So, sometimes I'm scared, oh, that's it, no, that's not it, just trying to think together anyway, so that's it.

Interviewee: But yeah, I think, for example, you made me open up a few things, even the way you, you've always been very cautious in the things that you... So, we see,

Chiara, that you like it and you study, so when you put a seed there, we know, Chiara saw it somewhere, wait a second, so, like...

Interviewer: Chiara would like to study more, but you know what academic life is like, so...

Interviewee: Are you married? Do you have kids?

Interviewer: No, no, I don't know how people do it.

Interviewee: I do not know either. So, like, a PhD with a team that also has another... Look, even members, parts, like, of the group, when I said, for you to see how this is very interesting, when I talked about reducing the number, asking more open questions and listening to the user, some in the discussion, because we also have the laboratory here, there's a lot and there's an exchange, new students come in, they leave, scientific initiation, when I mentioned this, there was one who was totally against it, no, because it has to be a number, it has to be, I don't know what, you needed to see it, he argued with me like that. Look, then I, wow, how lucky we are online, otherwise I would have gotten beaten up, and nowadays when you talk to him, after we, you know, totally changed, really open because, look, did you see that? Just that, well, I didn't want to impose myself at that time, because I saw that he wasn't ready to listen, and I wasn't ready to prove it. I still needed to study more, in that regard, the exchange was very cool. Then we started, then we distanced ourselves a lot at the beginning. When it was face-to-face, we met a lot inside, so there was an absurd exchange inside the laboratory, man, it was very enriching. Then, when things started to calm down from the pandemic, then we started, let's do it online, let's do it online. I don't even know who's on the program and who's not, I don't even know what you're researching. Before we knew everything, we were each other's test individuals: no, that's not going to work, that will, I said, where is it? That's why now every Friday we're doing it in the morning, and this week, for example, debate about the ethics committee. That's why I said that I'm already finalizing everything because we'll point everything out precisely regarding the committee, so now we are resuming these exchanges, and people are more open.

Interviewer: Could you tell me something about this group? Is it a group of researchers, technicians mixed together, I don't know, what is it like?

Interviewee: It's like this, inside... Here at UNESP, at our faculty, at our university, at the faculty of architecture, communication and design, at the graduate course in design, we have two lines of research, we have products and we have ergonomics. One of the coordinating professors of ergonomics is Luiz Carlos Paschoarelli, who is, has always been my advisor and who is now on our team. He, for me, is the pope of ergonomics, of design. In the last few years, I think it was about six, seven years ago, the one who joined us was Fausto, the other member of our research, and he has, he has a degree in physiotherapy. So, he contributes all this side to ergonomics well, with a very technical perspective on the subject for us and the two are coordinators of the interface ergonomics laboratory. The interface ergonomics laboratory has been around for more than ten years, always under the coordination of Professor Paschoarelli. Now he shares this coordination with Fausto. So, we have an environment here at the university, we changed, a few years before the pandemic, let's think like that, we had changed. So, we have a small room divided in two. Afterwards, I'll even send you a photo. In a space, we

do the data collection, there's a sink, there's air conditioning. We always try to balance the temperature. We say it's a controlled environment, so in cases of research that will be carried out within this controlled environment, it's this room. If you need to make a prototype or something, it has the sink, there are some of the 3D printers that we have there. So, there people can change the room until they come in and talk, paint the room green because I'm going to do data collection, it's what green influences, top of green, so over there we have an experiment room. We usually do it, so as not to have one data collection conflict with another on the calendar, so we schedule it. Guys, I'm going to do data collection there this month, such, such, and such, that's it. We know that at that period of time the room is reserved for that researcher, within that, who is part of this group, those approved on master's degrees, those approved on the PhD, me on the post-doctoral program. Nowadays, there are two, me and João, only João is a part in relation to the computer, ergonomics, interface design part of the computer, and scientific initiation because when we invite students to see if any student, usually a scholarship holder, right, if any student wants to work, then let's suppose, since I joined the program, which was 2011, 2011/2012, right, it's been almost ten years, ten years already in the program, it's very interesting, because, you know, we get together either in the morning, or in the afternoon, or all day, usually we stay the day, so much so that there is a small part that has a microwave, there is a fridge, because we have lunch, we end up staying there all day in the laboratory, so there are tables, then in the other room that is for study, there are tables, so we work, each one takes their computer and so forth, work, so there's a lot of exchange in this environment, so, for example, this time we were talking about the committee and ethics, oh, so-and-so, I don't know what, what the committee is, what you got there, how did you do it, so let's talk, guys, I made a questionnaire for my PhD. Often, there are tasks, you know, so we sometimes open a bottle, or wear something, then there are the... then they say, be my pre-test, because sometimes we use pre-test people, those who have already collected or not collected can give feedback. So, for example, the people, they use it. I keep quiet. I keep doing it the way they are, for example. I'm the user, right. I'm the test, then do that, do that, then I'll write it down, then we'll go to the researcher and tell him about this exchange. Oh, at that time you asked this, like that, you induced me to do this, was that what you wanted? No, I said no, do it like this, like that, like this. I think it's better. So, we can get this feedback that we're not getting any more now. And our laboratory is a laboratory that exists, because we do a lot of testing of the product itself, of use, and because we were very harmed, because how are we going to do it online? Where is it? We need a completely controlled environment to do this. So, this exchange we miss it a lot. So, now that we are trying to resume, and because I think that now UNESP will start between the end of the year and the beginning of the year to clear in person again. This week the administrative part came back, so I think now, then the semester's over. So, I think that maybe now in the next one, we will be able to resume it, so it's this kind of people. So, well, there are people who do research on wheelchairs, then you learn about wheelchairs. There are people who do research about contact pressure for opening, closing plastic bottles. There are people who do it about colour perception. I've already done it on fabrics. There was one I did, I closed the eyes of the individuals, I took five samples of fabrics, then I closed the people's eyes and made them. It's an SD, a semantic differential to assess perception, but at the same time I did it with the same fabrics, only they were looking, without touching. So, how is it, for example, to sample the product without touching, you notice and on the contrary, so they are ... It's funny that they were mixtures of research, you

know. The person who is making a wheelchair together with the other's colour, let's add it here, let's do a data collection like this to try to understand how it is. So, there is a lot of this exchange of information.

Interviewer: Were they able to contribute to the questionnaire?

Interviewee: No, because we weren't bumping into each other.

Interviewer: Ok, ok.

Interviewee: They have been managing to now in these last two meetings, which is now the ethics committee. Leticia, who has now returned to Brazil, because she is another member of the data collection, she was finishing hers in Portugal for her PhD. So, now I can talk to her myself, because we are now in the same time zone. She started taking part again, she has already finished the data collection, right, so it is easier, and it now exists here in Brazil, which is the management of data from data collection already, because you mentioned the Database, right, so we are now trying to formalize that. But regarding the questionnaire itself, the group did not, only in this one, they had already helped, but now as we were far away from each other, so it was just my group.

Interviewer: Okay thanks, I think that's it.

Interviewee: It's over, how do I get out?

01:09:53



GENDERED
DESIGN IN
STEAM

ID71 - Developing small wind turbines with local women for domestic use in Mauritius

Interview transcript

Interviewee:

Khalil Elahee | Principal Investigator

University of Mauritius

Interviewer:

Dominique Marshall | GDS Principal Investigator

Carleton University

Date of interview:

27 October 2021

Transcribed by:

Way With Words

ID71 - Developing small wind turbines with local women for domestic use in Mauritius

Speaker Key:

DM Dr. Dominique Marshall

KE Dr. Khalil Elahee

00:00:00

DM Good afternoon and good evening, Dr. Elahee, and today is the...

KE You may call me Khalil. I don't know if it's okay for...

DM Okay, Khalil. So, you call me Dominique then. So, we're 27th October 2021 and here is the start of our conversation about your project. So, the first and most important thing we would like you to tell us about is the story of this project of yours, since however far back, however wide you want to tell the story. How did you come about with this idea and how has it been developed in the last few months?

KE Yes. Thank you. Well, from memory what I remember is probably while looking for funding opportunities, I came across this most interesting opportunity. And I think it was either on the internet or through one of the mails circulated. I don't recall exactly but when I saw it, I was interested mainly was this design aspect where gender is being included, in fact, as a core issue. This is an open conversation. I'm from the Faculty of Engineering. I teach design.

DM Can you stop just one second? I forgot to ask you one stupid thing. Do you speak French better than English because one of the reasons I am here is because I speak French better than English? Or do you rather conduct it in...?

00:01:41

KE [Non-English].

DM [Non-English].

KE [Non-English].

DM [Non-English].

KE [Non-English]. It is up to you. We speak French and English equally in Mauritius.

DM Equally? So, okay, we will do it in English because the whole programme is in English, but we didn't want to give a disadvantage if you're more comfortable in French. Okay, so sorry about this. Let's go back. You were telling me that you're training. You wanted to tell me what you have been training.

KE Yes. I have a background in engineering. So, in Mauritius, of course, the national language seems to be English. The official one, anyway, but of course, we are French speaking as well. We have been colonised by almost all the former colonial powers. So, what happens is I am coming back to the issue of where it all started.

00:02:39

I had a bad run in engineering. My first degree is from Cambridge in UK, but I've but at the University of Mauritius for now about 20, 21 years as academic staff. And I'm working particularly in the field of engineering.

I started in thermal engineering, thermodynamics, thermal engineering. But very rapidly, this is probably interesting, I have moved to... That's about 20 years ago. I have moved to Environment. I have moved to ecological issues. The issue of development, the issue of sustainability. In fact, my PhD is in Energy Management which I define as an inter-disciplinary field where we look into engineering but also economics, also the environment, and even the ethical dimensions.

So, what is probably important to note is that I have been, for quite some time, teaching design at the University of Mauritius to mechanical engineering students. And over the years, we're moving from, let's say, pure mechanical engineering design. We have included other aspects, like it's just not Ethics or Ergonomics. It's also now Sustainability, issues related to life cycle analysis.

But I found that interesting, and at the beginning, very honestly, I didn't have an idea of what it would mean, including gender in the design process. Not like one criteria among so many of those, fitting like ergonomics or ethics, but it's a cut across issue, it's a core issue through the whole design process.

00:04:36

So, at the beginning, I am still learning about it, how to integrate gender in design. Gendered innovation. So, we did apply for the project, and I have a team around me at the University of Mauritius. A multi-disciplinary or I prefer to call it an interdisciplinary team, but I just chose a few members because for some reason or other, I couldn't afford [?] a large myself. My colleague engineer as well and then one other colleague who was involved at the beginning but later, he became much more engaged in the project. He is from the Social Sciences field.

I think it was also when we did submit, we got some feedback and I think one of the responses or recommendations was to really engage someone who is in the field of Humanities, Social Sciences. That's three staff members, academics but also that's probably the peculiarity, I can say, of this project. Right from the beginning, I said, we would probably need to build it around the work of MPhil PhD students.

I've looked at some of the other projects. It's more involving research assistants, but here we really, right at the beginning, said we would engage and involve MPhil PhD students along with one research assistant. We tried to make sure that we have ladies involved because otherwise it is about gender. I mean, it is good to have as much as possible, men and women thinking about gender in design.

So, we did engage two MPhil PhD students. One is rather mature, an engineer. She is working for the Airports Authority. The other one is a young graduate. She was my student. She is now working in manufacturing engineering. The third one a post-grad, or rather a research assistant. She's the only one who is employed, as such, being paid for this. I mean directly paid for this project. She is a research assistant who has just completed her PhD. The staff members, we are engaged

but it is part of our job as research at the university to give time to this project.

00:07:34

So, then we apply. We sent a proposal, and I was quite pleasantly surprised to that we were... I think there was a shortlist, and it took some time because there was, I don't recall, for some reason some delay in the processing. Then we were quite glad to provide additional details, and finally, I think we kicked off with a project. I think I will stop here and then continue, because do you need to... Or else I'll tell you more about how we started the project.

DM The more the better. The more the better, go on. Whichever way you want to tell it.

KE Okay. So, when we started, I think the first thing was to get those MPhil PhD students fully registered at the university. I think that was, we didn't realise, quite a challenge because how can I put it? I think you will appreciate because you are from the field of history and I am from the field of engineering, and usually our MPhil PhD projects in engineering are very, very well focused and well defined around the problems in the exact sciences. Very well-defined engineering problems of a very complex problems in engineering.

Now, we have a gendered design project. The idea, I think, for the proposal is around vertical axis wind turbines which we have on rooftops in kitchens. And why we were saying, why is this not so popular? Why is it not so well adapted and adopted by people? There is a potential. The technology is there. Even the economics can make sense. Why is it not being accepted by people? Is there some problem in the design and we were thinking that if it's, in the context of Mauritius, as you know is a small island? Most households are governed by women.

00:09:49

So, is it a problem that they don't want this technology? Who decides on what to buy us, energy-related technology? Who decides on the budget when it comes to energy expenses at home, in the household, in the home, in the house, in the domestic sector? Who does the energy savings? Who wastes more energy? Things like that. We were thinking about energy construction in homes, in households and the idea therefore was to say, how do we go about to touch up on this issue of gendered innovation in the design of vertical axis wind turbines?

So, the idea was to see to it that first of all, we must ensure that those two MPhil PhD students get registered. I think the first thing that happened is that when we sent two applications, there is an independent doctoral school which looks into it at the University of Mauritius. And when we sent the two proposals, and that doctoral school is made up of people from the university, from the different faculties.

But it is being assessed. If you send it as an engineering project, it will be assessed by people from... That is my own colleagues at the Faculty of Engineering. So, I'm at the Faculty of Engineering and it was assessed by a colleague of mine and his feedback, quite genuine, I think he said. I mean, one of the projects the engineering one, which is on the design of vertical axis wind turbine. Okay, this

one is not so much of a problem, but he couldn't see the gender issue. Okay, he could not see how gender comes in. And so, he was a bit sceptic.

00:12:03

So, what we did, we delayed it, we went ahead with one application. But we kept working. And we're working, I mean we were working on the literature, understanding what we want to do, and then try to put it into details on paper or amongst ourselves, we had a lot of discussion. So, we had, I think, I don't remember the dates, one of the project proposals when MPhil PhD approved. The one on engineering, vertical axis wind turbines design, of course, we insisted to other elements related to the issue of, how you call it, gender.

But the other MPhil PhD project is probably about... We call it energy management. Hybrid integration of that vertical axis in the household with other energy consuming devices, appliances. So, it's about energy management. How do we manage energy in a household? How do we use? How do we also produce energy? And the vertical axis would be one of the components. The vertical axis wind turbine would be one of the components, but it's also about behaviour.

And the second proposal is not really hardcore engineering. It's more broader. It's more interdisciplinary. And unfortunately, it was assessed initially by someone from Engineering, and we didn't get very good feedback. And we insisted that it should be assessed from someone from Social Sciences. In fact, it was then assessed by two people, two reviewers. And we made it at the end of the day. So, the second project MPhil PhD, involving the more mature students. Mature, I mean, working already. I mean, 40s or early 40s.

00:14:10

So, we have these two projects. One is on vertical axis wind turbine design with a gender element. The other one is on the system. The system in the household, how do we usually use energy? What are the possibilities of using renewable energy and at the heart of it, the most important, we would consider the vertical axis wind turbine? But we won't neglect solar energy and it's more systems approach, managing energy and a household behaviours and decisions and saving and consumption, even storage issues.

But now the third challenge is, I think, how to integrate those two projects, which are MPhil PhD projects, proposals, which have started. How to integrate them and meet whatever we set as target and deliverables for the programme for which we are being sponsored, which is the one which is the project, the sponsored project. So, this is where our research assistant comes in.

So, she's involved in, of course, working with the two MPhil PhD students, but making sure that those two projects, they stand alone, but at the same time, they have to talk to each other. And finally, allow us to meet our objectives as far as this project, which is being sponsored on gender design is concerned. So, how does it work? So, now I can probably jump and tell you where we are and where we stand. We went through two lockdowns, two COVID lockdowns, and that was, to some extent, an issue.

At the beginning last year, particularly, because, like everyone else in the world,

we don't know what it is. And there was no vaccination, it was a total lockdown because it's an island, I think the government was very, very cautious.

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And early March 2020, there was a total lockdown in the island. And it lasted, I am trying to recall, I think for March, April, May, June, July. Almost four or five months. The university obviously was closed.

And what we managed to do still is work online. I think from the budget, we secured through the funding, I think that was extremely useful. I think I'm very grateful to the sponsors for that. We bought two laptops, and this is, so far, the only purchase we have made. But they have been extremely useful because to work from home, to work online, and also to have meetings or even... And also, I think there's an element of funding raised [?] between networking and what to do when it comes to internet and so on.

That was also, I think, a very good idea to contribute in that direction because although I think you can hear me clearly, the internet is quite expensive in small islands in Africa compared to the cost of living or whatever we are earning. So, I think this is quite an important investment that was made. Very useful. So, we've been working a lot online. More than 75% of the work has been done through meetings, emails, and Zoom meetings.

But we've also had a few... Because in between last year's lockdown, and this year also, we've had, not three months, I think it lasted two and a half months, again starts in March. Everything in the university was closed, but in between, we managed to have meetings but what has happened also is that's vaccination is probably... I mean, God knows how it works or not, it's not working, but there's the Delta virus right now causing some trouble, but because I think almost 70% of the population is vaccinated.

00:18:49

Mostly, unfortunately, it's not the best, most efficient vaccine we have. It's the Chinese vaccines. We are managing to open the frontiers. So, air travel is back. And also, business and universities are open, but we are insisting on taking all precautions. So, for instance, all courses are online except for short meetings, tutorials, or practicals or very important sessions. As much as possible, it's been...

So, this has been probably the way we have learned to work, and we are working and it's giving us some results. But we have reached a crucial stage where we need to do surveys and we have started doing some online surveys and we are getting the results.

But at some stage as you understand this project is about fieldwork as well. So, we will have... But taking all precautions, we should be able... I mean, God willing, it works. But we should be able to do that. We should be able to go and conduct, in particular fieldwork, which is basically a number of surveys. And also surveys and studies, case studies on...

So, right now, to put it very simply, without getting into the details, we have a sample of 400 interviews, short interviews being done mostly on WhatsApp on mobile phones. And then from there we are trimming it down to about I think 100.

The more thorough surveys, studies, more like question-and-answer time. They are the students and the [unclear] of being fully engaged.

00:20:57

But ultimately, early next year, we are planning to have thorough and very detailed case studies on a few selected households where we are thinking and we have to know, what is the consumption? What is the demand supply of energy?

So, this is going to be something we'll have to conduct, and I think I look forward to it. Because right now, unless something we don't know goes extremely wrong, the government doesn't... I mean, we don't think we are going to close down again, because we close down unless there's something extremely... The number of deaths has increased. And it has increased significantly. And this is what is worrying some people here. But I think it's quite clear, the government wants to go ahead. It is a touristic destination, and they want to open to tourists who are vaccinated.

So, all activities at the same time are getting, we can't call it back to normal, but so this is probably we are quite positive about moving ahead with the surveys and the fieldwork. In parallel, this is mostly related to one of the MPhil PhD projects. The other one is the vertical axis wind turbine.

We have, I mean, myself, I'm the PI for a project, which is funded, has still being funded by the Royal Society of the United Kingdom. It was a huge funding we obtained, and we have invested under that project on renewable energy in Africa. We have invested in what we call a numerical, in fact, workstations servers and softwares to be able to do numerical modelling.

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It's about numerical analysis modelling of systems of flows of, for instance, flows across turbines. And this brings us to the other MPhil PhD project. The engineering one. And we have all the facilities. It was quite a good and huge investment through that funding from the Royal Society. And the student is using those facilities. So, she has started doing the design. She's trying to integrate her gender into it. This is quite a challenging thought. We had last week a very good session on participatory design and one of the things I'm still learning is that a prototype doesn't have to be physical.

So, a prototype can be developed through surveys, through conversations, through bottom-up design discussion and drawings. I think it's an added value to whatever I've been doing in mechanical engineering terms of design, because it allows us to respond to needs like integrating gender issues. And I think we can even use it to look into qualitative issues related to for instance, everyone is talking about COP26 in Glasgow. The climate change, but a lot of it has to do with uncertainties. A lot of it has to do with qualitative knowledge.

We would even say when we are doing the surveys local knowledge, talking to people, knowledge we won't find in books, but we will find from users, people, housewives or designers or people who use the technologies. So, I think this prototyping which is not just physical is probably a tool which can very much help us to, in fact, to bring us an innovative touch to whatever we have been doing as

design so far. Designing in the more conventional way of engineering, or mechanical engineering products.

00:25:23

So, our students and engineering students, I mean, she's trying her best to integrate in her equations and her fluid mechanics and everything. That's quite the challenging part. Design criteria, customer needs, we would say, which are more of the qualitative nature, which are more based on knowledge, which is not numerical or quantitative or measurable. Metric, not really, but in more like, what people feel, what people like, what people find, I think. What I also like is that it's also about what people consider to be good, what people consider to be acceptable.

That's very interesting because it's moving from a design which is very much based on what I can say mathematics or physics to a design which is more interdisciplinary. I think one of the sessions we had earlier with the team, I think it was called one of the sessions, Lab 1. I think the word that was used was it's like a sort of exploration. So, we are discovering, we are exploring, we are constructing new knowledge. So, this is something the student is doing her design on numerical platforms but also now integrating into it, gendered issues, gendered innovation.

So, where do we stand now? Right now, is that we have to do the surveys for one of the students in particular. Everything is being backed up by the research assistant who brings things together. She's quite capable as well, because she drives the students. Although MPhil PhD project should be independent work, but she tries to see to it that we have focus on the project, which is the one being sponsored.

00:27:47

As deliverable, we would like, let's say hope, pray, God knows if we can make it. But I think we're on track. We are getting back on track, let's put it this way. Because we hope and pray there's no lockdown.

But we need to conduct those fieldwork and the case studies and then the engineering design of the turbine. We all have sent... There's a strict tender procurement process at the university. We have and we put that in the budget right from the beginning, a 3D printer. So, we are looking for one which will be used for printing, 3D printing of blades.

And hopefully, the target would be, I know it's a bit behind schedule, but that's the best we can do right now is probably with the... Because we also have to give time to the students to try understand the research, to understand what they are doing, and to address the complex issues.

So, I'm thinking around July, August next year, to be able to do two things is to have a full fledged analysis and report on the surveys related to gendered issues in management of energy, in households. And the other one is the production of prototypes. And maybe it's not sure if we can start testing them but we should have the prototypes, the physical 3D prototypes based, of course, on the design process, but also fully integrating gender issues.

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And the good thing with the investment in the 3D printer, we are having one which is, we can't say it's an industrial one, but it is one which can really replicate those turbine blades. And hopefully, let's say we get it right, that will be extremely interesting, because then we can have several models and run them.

And I think, I don't know where it fits really in the timeframe when it comes to the sponsored project, but what I look forward to is the students to be able to carry on and integrate.

Including the research one, how is gender an issue when it comes to energy management in households? How are decisions made? How is energy being saved, or energy being efficiently used, and how is renewable energy integrated? Including, of course, the issue of vertical axis wind turbine.

And the other one is what is the design that, I think, proves gender and gives us whatever we are looking at in terms of performance, and at the end of the day, not just performance, but it will be acceptability and impact at grassroot level. I think I'll take a little break and look forward to anything you would like me to clarify. I've lost you. I can't hear you.

DM You haven't. I forgot to unmute myself. I forgot to say at the beginning, if during these 90 minutes, you would like to stop for a few minutes, you tell me. Otherwise, I am happy to carry on going.

KE That's fine. That's perfect.

DM So, thank you so much for this first story.

KE You have to stop me because I can keep talking. This is the problem.

00:32:06

DM No, no, that's the whole idea. I don't want to stop you because I got this stuff that I want to ask you and you're answering it before I am asking. So, you have touched all sorts of things that I was interested in but it's also nice to see you saying it in the way that it unfolds in your own thinking.

So, I am going to ask you to go back a bit to some of the things you said. One of the things you said is already you were designing these turbines, and you were worried about the fact that they were not being used as much as you wanted. And you thought that it had something to do with women in the household. You already thought that before you even saw the call for projects. Am I right?

KE That's a very good point. I think it just happens that we are talking vertical axis wind turbines. But with reference to my own background and the work I have been doing over 20 or 30 years or so is that I think many of the problems we are having in engineering is because designers are gender bias in the sense that most designers are men. And they don't take into account the users. And usually, they design not for what I would call real efficiency. They design for performance. I don't want to digress, but if you look at a thousand, you look at so many things.

I think if they were designed not just by women, but in a more gender sensitive way, we would probably... I'm in the field of engineering, so I teach some of that. We'll have less disorder entropy to put it this way. So, the point is, ultimately, we

came to the case of the vertical axis wind turbine, but if I can give you other examples because I'm in my PhDs in Energy Management. I think women do make very good energy managers. They are very more sensitive to how not just environmental issues but how things should be done in a way to avoid waste.

00:34:41

I mean, we can't generalise, you know what I'm saying, but there have been a number of studies in the literature related to who are the most energy efficient drivers or when it comes to the use of energy in buildings or whatever. I mean, as you're doing research, nothing is black or white. Wherever I've noted, I just want to put this in parentheses, in brackets, is that wherever you see that, it seems to be that women are better at managing energy. There are other parameters which seemed to weigh as heavy as the issue of gender.

Like, for instance, if we consider education or income group, there seem at times probably to be other very significant parameters and factors. So, it's not very clear cut or black or white here. But there is a gender issue when it comes to design, which no one can deny, sorry, is that we try to include gender issues, when it comes to ergonomics. When it comes to the dimensions, the size, or anthropometrics, or whatever, even aesthetics.

But the thing is that if we really want to do justice to the end user, and to get... It's not just for business reasons, but if we want really to have a product which is useful, purposeful, at the end of the day, we really have to look at the gender issues fully. And why we focus on the vertical axis wind turbine, because I don't know you have seen I think in Australia, you have it in some islands, you have it. But it's a vertical axis, small turbine, which fits on rooftop. It's works very well. Technologically speaking, it's not rocket science, as we say.

00:37:08

But why don't people adopt it? Why does it not become... Like you have a roof? You should probably consider wherever possible, not always possible. Again, why is it not always possible? Why can't we think that it is something that is going to fit on households and provide green, clean energy and abundant energy at times.

So, this came to us as an issue, which would be of interest, because usually it's on the rooftop and energies used at home for, I think, probably the refrigerator and lighting would be two major areas. I'm referring to households in Mauritius, refrigeration, lighting and probably issues like when if you have some ironing, or you also have washing machines. This is again, the issue.

We have some statistics locally and elsewhere, research has been done. We would like to say serially, because most of the appliances, of course the oven is also an appliance that is used. But usually in Mauritius, it's not electricity driven. It's not electric, it's more gas.

So, the idea is so much energy used in households. And a lot of it relates to decisions or management done by women or the housewife, the mother, the ladies in the house. And a lot of possibility of generating electricity. We are on an island. We have winds on the rooftop. So, that looks to us like an interesting problem. So, this is where I'm just trying, I hope, to answer your question. Whatever we've been

doing, and we've been seeing researching or reading what happens as well, brings us to this local problem in a small island.

00:39:19

DM So, if I understand you well, already built in your idea of a vertical axis turbine was this idea of being closer to the user and all that. But you had not made the question of gender as explicit as you have just done.

KE It was there. If I may clarify. I think even today, I'll give you another example on which I'm working. For instance, I work a lot on, for instance, use of biomass, biofuels or even photovoltaics. I think in our research proposal, we referred to that example, is that when the government had a scheme for low-income groups, giving free photovoltaic panels to low-income groups, and most of those beneficiaries were women as such. So, it's turning out that women tend to be...

Also, it seems to be confirmed, every day now, is that job opportunities for women are more important in renewable energy. Right. Comparatively, I mean, in terms of percentage, if you compare the job of opportunities, for instance, in the automobile industry, or where you use fossil fuel. So, to answer your question, probably in a clearer way. No, but I think this issue of gender has been around. I think, not just an issue of gender, I think it's also related. I was mentioning education level. It doesn't mean people who have higher level of education are usually the more energy efficient.

00:41:24

But there's also the issue of culture. I'm working also on the issue of what we call ethics. Ethics, which I explained myself, what I mean is that, for instance, I believe that I'm doing this as a good deed, saving energy. And so, it's ethically the right thing to do. It's morally also. I think attitudes, behaviours, the choice we make when we buy energy, or we save energy is also driven by not just the bills or the economics of it, it's also driven by the meaning we give to life and death, and our beliefs.

And I think there are all those issues. But one of the issues affecting, influencing... This is what I've called energy management is one of the things that drive energy management or make it, it could be the opposite, not happen is that it could be those non-scientific parameters. It's not just about the physics or even the economics of it. It could be culture. It could be education. It could even be gender. But in all honesty, we just say, these are possible factors. It's always multifactorial. It's never just one factor. But that project gave me an opportunity because we saw a gendered design.

Probably the other place I saw it was gender innovation from Stanford and what they have been doing. So, I said, this is an opportunity. And also, we have people around me who are interested, it's not just myself, by the way. We share our thoughts and we feel that there should be a possibility to engage collaborators, researchers and in the context of islands, just to again, come back to your question. Let's try to test this hypothesis. Is it right? Is it true that if we include gender in design, it may make a difference? This is what we are trying to see.

00:44:01

DM So, I will just ask you about how you were thinking about gender before and thank you for this answer. That's exactly the kind of things that I wanted to know more about.

KE Sure.

DM So, could I ask the same question about design because you said, I'm trained as an engineer, but very soon because of my training in energy management and all that, very soon I included in my teaching and in my disciplinary practices, questions of design. And then you said, we as well. You said, as a programme in engineering, you don't teach just the technical stuff of engineering, but around it, larger questions of design. So, could you tell me about this? What does it mean, design? How does it change in discipline?

KE Sure, if I've understood question right is you're asking me how does, in my teaching in my work, I try to through to think out of the box and to go beyond the convention.

DM Which is what you said. You said the sentence this way. So, I am asking you to elaborate.

KE You want me to explain more of that.

DM Because you seem to be saying narrow engineering, bigger thing around design.

00:45:11

KE Exactly.

DM I've started to do this and...

KE Look, very good.

DM And your department, you're telling me, is doing this as well, not only you.

KE Sure. In the faculty.

DM Yes, go on. Go ahead.

KE Well, I can say let's put it this way. Before I answer your question. I will say thank God, now I'm a fully-fledged professor. So, I can say anything that people don't really mind. If I would say the same thing probably a few years ago... I mean, it seems when you're a professor, you can say anything, and people will accept it, unfortunately.

But I've always thought that we've been... My own background, if you go back to primary, secondary school, we've been taught disciplines in such a way that disciplines are made subjects or maths, physics, chemistry, literature, arts, or sociology. As if they stand alone, and they don't meet.

I think this is probably a major deficiency in our education system. I would say in the West, probably, or, I was in Cambridge, UK, but our system of education is British in Mauritius. And to a large extent, I think, we have an education system which is too much oriented towards exams, and you won't need an A+ in maths, you need an A+ even in English or A+ in sociology or in literature.

00:47:00

But the thing to note, I'm a product of that system, but I could see it is probably my own feeling that it's not really what does justice to what human knowledge should be about. I think we should be able to have, I think, the words I've been using interdisciplinary, multidisciplinary across disciplines. But I think this comes naturally. And I started, I was telling you with... You just stop me if I'm just going too far.

DM I will, don't worry. I am going like this because I don't want to.

KE I started with engineering. I started with engineering, and then very soon, very early, that is, before people would talk about climate change, or were just starting to talk about it. I could see that it's not even economics, it is not even environmental.

I have the five Es. I start with energy. The first one, the energy occurs in nature, like the wind, it's useless unless you convert it. The second is engineering. Still not much use unless you know about the costs. The third would be economics. Still, today, and more and more, we have to talk about the environmental impacts. We reached the fourth E. But then that was also in my thesis. The fifth is ethics. The ethical dimension, why do we want to? Is it good or bad? Ethics defined, of course, in a broader way.

00:48:38

To come back to the point is that I've always thought that we should be, even engineering, having a broader take at what is it about this? It has to be about not just engines, as such. It's also the impacts on society. I would even go to the extent, this is now I'm thinking more and more about that. Probably, at the beginning, I would probably think that we just have to bring in together different dimensions, as I call them.

But now I think philosophically speaking even, the philosophy of knowledge itself is probably playing us a very bad trick. I have kids, I don't want to go too far into that, but I think we are not giving the best education at school, because it's always about exams, also it's about different subjects. So, this is probably why I'm very happy to have this project where it's not just about engineering.

As you can see, I have two students. I mean, one is basically in engineering, but still, I insist include the gender issue. And the other one is in Social Sciences, Energy Management as I call it. The methodology is something else. It has to be rigorous. It has to be developed in a rational way. It has to be something which is solid, which is not just... But my point is that this [non-English].

DM Compartmentalise in English, same thing? Compartment.

KE Yes. Fragmented.

DM Solis, [non-English].

00:50:40

KE Okay. So, I think this is the danger. Just to end this story, is that I also have a very a very strong advocacy on a national level. So, for instance, right now, our Prime Minister is going to Paris. Not Paris, is it Glasgow? But yesterday, there was a bill

in Parliament on offshore petroleum exploitation. So, I write to him, I express myself in public in the media. So, I say that this is a major contradiction.

So, it springs from the fact that at times, I mean, this is probably... I don't want to spend more than ten seconds on that. If you look at just the engineering and the economics, we will get probably no real solution to the climate issue. So, it brings back to what we were saying about, yes, right from the very, very early time, I've really thought and still think, and I hope I'm right. Anyway, I'm surrounded by people who challenge me at times, but I think we are thoroughly determined to have, with all humility, we don't have solutions.

But we think knowledge has to be broad, and it's full of uncertainty. Knowledge, the way I put it is, the more you learn, the more you learn that you don't know. And then we can learn from for instance, people. Traditional knowledge is very strong in Africa. And so, to cut it short, I do think that these exploratory, or these ways of looking for constructing your knowledge in an interdisciplinary way are extremely interesting in design.

Just I want to share that with you. Yesterday, I was on a board of scholar advisory, interdisciplinary board for a programme, an undergrad programme, BSc programme in sustainable product design. So, that board you have academics, but you have people from industry.

00:53:18

And including there was a designer on the panel. He is not from university. He was telling us something is that the entry requirements for that programme shouldn't be just the sciences or maths. He says, open it to people who have also, for instance, been doing the arts or non-science subjects and then give them a foundation course or programme.

Because the word he was using is the need of creativity. Because he has a designer, someone from industry. He's finding our output from the system here to be short in terms of creativity, simply because they have learned something in school, they apply it and they keep in the same truck or silos, you were saying. He's a businessman. He's not a Mauritanian. He's invested a lot here. He is a designer. He wants to recruit young men and women who are broad minded and can think across the different disciplines.

So, I think we are living in a world where we need to remove, in a sense, those walls or barriers while being very rigorous in terms of methodology. I think this project gender design is probably proving to be a chance for us to test those ideas. We are in the context of a small island. It's very, very vulnerable to climate change. Probably I don't know, if you lost a major oil spill? It was in the press everywhere. And at the same time, we depended heavily on tourism. We import all our energy. We have lots of potential for renewable energy.

But now, I just mentioned the government wants to go for offshore petroleum, which hasn't been proven or detected. So, I think it's one-word, last word would be governance. I mean, governance, good governance would probably sum up what we need is strong policies, evidence-based, science-based policies, but then policies, good governance, that look at what people need, and what the planet also needs.

00:56:09

DM So, you often, when you talk so far about the community that you have engaged in this project in particular, you say the island. So, you actually always think about the whole island. It's not one place on the island, it's really the community you have in mind. It's the whole island?

KE Very good question, because I was surprised. In Mauritius we have the main island, which is about 2,000 square kilometres. Then we do have three or four, not so much major, 100 square kilometres, 200 square kilometre islands which are inhabited.

And unfortunately, some of those islands, we would put it without getting into a political discussion, occupied by the United States, for instance. There's a famous one, the Diego Garcia, which is a military base, that people have been expelled from those islands. I would like to say that, and they were thrown away to have a military base there.

But coming back to our case, with those islands, we are considering all those islands in the study. And in particular, what's the difference between the main island which is the most developed where you have 1.2 million people compared to the smaller islands where you have 30, 70,000 people. The smaller islands are less developed, which means in a positive sense, they are full of natural beauty and lots of resources, natural resources and potential very good tourist destinations.

00:58:05

While the main island is 1.2 million people in 2,000 square kilometres. It's very, very dense. We have almost 1 million vehicles just to give you an idea, two wheelers and four wheelers included.

So, to come back to... We are considering all those islands and my point is that I was really glad last week or the day before to learn that people in those small islands are extremely interested in vertical axis wind turbines which is interesting because we would think there's probably a question of mindset. People who live in the main island, they look a bit more, I want to use the word modern, certainly. But they look more like, how should I say I mean, they are more urban, if you want? Urbanised.

DM Just one second. Thank you. It is just my family delivering some tea.

KE No, please don't... Yes.

DM So, they want to look more modern, whereas these smaller islands there's more potential.

KE I didn't want to use the word modern. I would say urban in the sense... It would be like the mainstream where the style that is being modernised, let's put it this way. But then in the islands, you have of course, that tendency, oh the train is there. But still, you have a different lifestyle. And you have probably... We have yet to analyse all the results thoroughly.

01:00:13

But huge response, I can say, from particularly only one small island, which is very important to us because of its specificity. It's called Rodrigues and there's a huge response from that island right now for this technology or project we are doing. That should be interesting because it would allow us probably, I don't want to anticipate or to compare the more urban with the more insular rather than rural, insular households.

DM Okay, so can I ask you something else about one thing you have not mentioned so far in describing the whole thing is are there any differences in your conception of the project between people who have more or less means?

KE Exactly. Very important. I think the best way to answer your question is tell you about our sample. We have divided it because our population are households. So, what's a household now? Is it a man? A woman? A father? Mother? It's a household and then our household, the first thing we distinguish with the households in terms of regions. So, we have ensured that statistically, in a significant way, we cover all the regions, including the islands. And the second item is income. Income group.

01:02:02

And then when we interview a household, the first question we ask because the household is not really gender defined, we ask, who are you? They say, father, mother. How many people in your household? Says, ten, five. How many children? How many grandparents and so on? And we were laughing yesterday, because how you call it, the one who responds in the name of the household, he calls [non-English] in French, because French is... Our national language is Creole but very much like French.

So, the one who's responding refers to kids or [non-English] children. Anyone else that is his son who is probably 20, 30 or even 40 years old. So, we just have to bear with it, because the one responding calls his... The one living under the same roof.

So, a household is defined as one roof and one kitchen. So, it's working so far, the way we have defined that. Just to come back to your question is about the household as such, is defined therefore, in terms of people living in under a single roof. And we ask questions. Of course, we will identify who is answering the question, but we are going to relate and analyse the results for that household.

But of course, that element who's answering... Is it the father, the mother or the grandfather, grandmother? I mean we'll have yet to go into the final details of the research, but one word is yes, income group is extremely important.

DM Okay. Two things out of this. First, on the Creole, so the language that you are using in your project is whatever comes up? It could be French, English, Creole. How do you deal with the language?

01:04:19

KE That's another very, very good question. At the same time, I'm also benefiting from this because it reminds me of the key, I won't say achievements, but what... We have a questionnaire in English and just underneath the question, the next line is in Creole. So far, the interview therefore goes into English and Creole.

And ourselves, and that was a bit of a surprise because we did a pilot, and it seems naturally we go for the Creole version. Creole is spoken like we should say by 95, 96% of the population. English is not really accessible to everyone, while French, I would say, is much more accessible to and spoken and understood by everyone.

But when we have it in Creole, ourselves, don't want to say others, it seems to be more down to earth to read the Creole version. And people have been, I think, massively responding by reading the question in Creole and the answering. Not so much you're using the English version, which we have kept there for the purpose of getting it right in terms of recording.

DM And so as you were talking about... I am aware that we only have 15 minutes left.

01:05:56

KE No, please feel free, I am not [overtalking].

DM We can carry on a little bit longer? Yes, okay, good.

KE Sure.

DM So, you were talking when I asked you the question about class and money, you started talking about generations. You talked about grandfather's sons, older sons, the whole lot of it. So, as you progressed in this project for the last two years, has your understanding of men, women, generations and how you address that changed? Or is it's confirmed or...

KE Unfortunately, if I get your question right, is my understanding of the issue of men, women and generations relative to energy. Do you mean it's relative to...?

DM In your work. In your work, how you think about families, gender and children and parents. This two-year adventure so far has confirmed your understanding of this and how households work in relation to your work? Or has it changed?

KE That is a difficult question because very honestly, my understanding... All of us are the product of our environment, of our families, our upbringing. But I think my personal answer would be, I was brought up by, obviously, by my parents, but I've had in my home in my house, my grandmother who passed away this year at the age of 108. She was 108. And thank God, she was in good health and everything. And obviously, she has had a huge influence on me, because she was a widow at the age of, I think, 20. And she brought up my father as her only son.

And so, I think if you talk about generations and about gender, I think she's, God bless her soul, but she's been a wonderful person. My father passed away. So, I don't want to get personal, but my own environment, there were a few ladies, women, my own wife, my daughter eventually, she has... Children have impacts on their parents. But beyond the environment with family or my close, intimate environment, I think they have helped me significantly to believe in fact that women are the better gender, if I may say so, in a sense.

01:08:52

I'm probably biased, but I think they there was something that appeared the other day, they were saying which countries have best handled the COVID-19 pandemic, and they put the pictures of all those heads of state. And it turns out, I

think there were ten women. So, I accept probably I'm a bit biased.

But to come back, I do believe that when it comes to weather climate, energy issues, or renewable energy or even technologies, even my students. I don't know if the same in Canada as well, but at the university, but also, I would say in schools in Mauritius, primary, secondary, you have girls always doing academically, even in the sciences now, better than boys. So, I think that's quite clear in terms...

Sorry, I don't know if I have answered your question but I'm seeing this. I do believe that if we do empower those women, ladies and give them equal opportunities, and I think we can probably have a better world.

When it comes to generations, I do think we have an aging population in Mauritius. As from 2030, the population will start decreasing. We have a very much an aging population in Mauritius, because our, how you call it, reproductive and birth rate is not very impressive anyway. So, the point is, again, I do believe our elders, I am not referring, obviously, to my grandmother, but people around me, even colleagues who have just retired at the university, I feel they do still should be able to contribute a lot to society.

01:11:08

So, when it comes to gender issues, or when it comes to issue of generations, I do think that in island situations, but I can't say for the rest of the world, but here, in French [non-English], the hope lies probably in the older generations who are here. So, I'm also moving into that probably, slowly, but surely, but also into empowering the women of this country. But this is bound to come. I might be wrong. But when you see them getting the best results, they are coming out of the universities, they are applying for the jobs. Most of the judges in this country, for instance, are women even.

So, in certain fields, not in politics, not in probably business, but I think it's not always very fair to women at times, they don't have the chance. But wherever there's an opportunity given to them they are they are doing extremely well. So, I don't know if I answered your question, was it really what you asked?

DM

Yes, you have. I was talking about your own ideas of how households work. You said many bits before, but I was asking you to put them all together. So, the next thing I wanted to ask you, shift a bit, is about the programme itself. So, as you told your story of this whole project, you spoke about the application stage, and then the first lab and ways of thinking about gender, and then you talk about the prototyping lab recently and things like that.

So, I would like you to think about when and how you interacted with this programme, including if you did, Emmanuel, the regional person. And if you have, also the person who was the sector expert who might have interacted with [overtalking].

01:13:17

KE

Yes, Fred is.

DM

Fred, yes. So, could you speak in general from all these moments and how they contributed or did not contribute to the making...

KE Yes, I need to say that because I have extremely impressed. Not just to flatter anyone, but I've been working with other consortia. I've been receiving quite good funding from... We are French speaking. So, Agence universitaire de la Francophonie. At this stage, I've been funded quite generously by international organisations. But this is the first time I'm dealing with a Canadian entity.

First of all, I think it was very much, just to be fair to you, a very, very constructive and very enriching experience dealing with whether it's Kerry, whether it's Fred or Emmanuel, or even the research assistants. I think there have been some changes. And I was glad to converse with you today.

What I've noted and I think this is extremely positive and something I should hopefully take away from this programme is that well, it's probably because of the interdisciplinary nature of the programme. But also, I think you have a very, how do I put it, it's a very open and while being flexible, but at the same time you have a very... Sympathetic won't be the right word. But I think you put others at ease. By you, I mean those for running and managing this programme.

01:15:28

You put others at ease because I had a few fears. I will tell you about my concerns, my fears were when we faced the COVID problem, lockdowns when also I didn't manage to have the two MPhil PhD registered. You will probably look at the record, I sent a long letter requesting a meeting.

DM Yes, I've seen that.

KE Really, I was flagging all sorts of others, because I could see. But I would like to thank you. And I think Fred was quite instrumental in that, in particular. Unfortunately, Emanuel also I think, after some time, I think he had COVID-19. But he was very helpful as well. But my point is that without being very prescriptive without being also, we go to the other extreme, too flexible. But I really appreciate the fact that we managed to go through those harsh times, it was, in fact, challenging times. And I hope they are behind us now. And we look forward to moving ahead.

This is what probably is... Probably, I'm grateful to all of you for this approach for this study. I've had other experiences, which right now, I'm writing a report for one of the other funding agencies, and there unfortunately, because of COVID and everything, the main driver of the project, in fact, he just gave up. You see what happened. This is not your project. So, I think you've been around. The whole team has been extremely, a very good companion. The whole journey remains to be covered.

01:17:35

But I think it was very reassuring for me to see that you were not here to put pressure in an extreme way, but rather to see that we have problems, I would say it's a problem. But then you did bear with us. And I think we've managed now to come out of those harsh and difficult challenges.

DM Good. Good. Nice to hear. I can speak about how it looks like at this end, but not just now. So, the very last theme or the theme of this conversation is the future. So, you've already told me about the immediate future of your project which leads

you to the next summer. And at this end, finishing that programme includes one last report, and then a virtual exhibition where all the projects will be showcased in a way that we're still trying to shape and consulting about.

But then, at this end, when it finishes probably like altogether December 2022, or something like that, we have no clue what we do next. So, our mandate was to organise these 20 projects, and to distribute the money in the best, most interesting way. And then to find as many synergies as we could.

And now we're thinking we could shut it down, stop. And at our end, it means what it did for two years, and it will do for another year is enhancing and creating meetings between disciplines also provide, like for you, opportunities for training, and then opportunities to know people for our graduate students and for us.

01:19:28

Now, what do we do with all this when it's over? So, what I'm asking you to think about is you've already told me where you project seems to be going. So, there is where your vertical axis turbine is going anyway, but also where are the things that you have built or acquired during that programme might grow so far? And would do you have suggestions for here to try to keep some of these positive aspects or maybe grow them or reinforce them or solidify them or something?

KE I really thank you for giving us the occasion to give our take on this very important question you're raising. I would probably put it this way. I don't want to exaggerate. I really don't want to exaggerate. But I think it would be very, very regrettable if we stop there, because I think that the very nature of this programme is really that you have, in fact, provoked a huge expectation. I don't know if others have no... Because now, I mean, we are seeing new things, we are seeing things that we never thought of earlier. And probably also there are now opportunities arising.

I will just give you probably, to put it simply, in a simple way, examples. When I listen to what others are doing. For instance, there's one of the groups or teams working on [non-English].

DM Prosthetics they say.

KE Prosthetics, okay. And they are doing 3D printing, and that really did really give us some ideas of how we can do our 3D printing. There are other groups working on issues where you have solar cooking, or solar systems and so on. And I think the opportunities, probably to allow us because of probably COVID-19, we haven't been able to meet in a sense, except for virtually. I think, if the opportunity arises, not just for the sake of meeting, across the teams, there might be new collaborations, new opportunities.

01:22:53

I think this is, of course, under this programme, which takes a new shape or a new programme, I think there are ways that we can collaborate and continue what we have. I don't think if you, not you personally, but if the project stops, let's say in December 2020. That will be really a shame because, in fact, it should be what we call the [unclear]. It should really take off from there in terms of new objectives, new ventures, building upon on what we...

Because I don't know how to express it. But we have discovered a new way of thinking and new way of working, probably new partners as well. And this is probably what was the target when...

But I think for us from our end, just I think for one thing, our two MPhil PhD students, we look forward, they will complete their studies. But I do really see at least both of them, or at least one of them continuing in that field of gender design, or whatever shape it can take in different projects funded locally, here or internationally. I can also see a number of publications. I mean, no one is perfect, but as an academic or researcher, I think I don't believe in publishing at all costs or publish or perish. I don't really believe in that.

01:24:43

But so far, you haven't, I think, required us to do that. But I think it can contribute to share that with others. Through the conventional way of defusing of vulgarising or research findings. I was part of the team some time ago. It was on environmental justice. They had the team, multidisciplinary or interdisciplinary. We met at Oxford University some time ago. They do publish a number of... There have been meetings often that I just attended one of the meetings some four, six years ago, probably. But I think there also the expectation was raised.

But today, it is very much in the in the news. The idea of climate justice and everything. I do hope and pray that one day this issue of gender in design will become widely recognised. And I think we can, in a very humble way, participate into that through... I don't have any exact proposal, but one of the things is to allow, in particular, I've been in touch, not just with the African teams, but you have teams from across the world. That will be quite interesting and to see to it that those teams can probably work together, probably or even develop further, some of the existing projects.

Because I'm not thinking in terms of... Conventionally, we have been thinking of research, development, innovation, and then commercialisation. This route towards doing business at the end of the way, creating value. This is the way the world has been going and this is what, in a modest way, have been doing. But you can probably, and you have seen, we can create value otherwise by not just focusing on the GDP or the profitability but probably creating value through free sharing knowledge, sharing values, empowering and doing justice to women and doing justice to traditional knowledge.

01:27:38

And the bottom-up approach in design, I think is quite important because the modern society, people are designing. There's iPhones and everything. It's just designing for the sake of designing and selling and with all the impacts on the environment. And whatever you do, and you're just creating fads, fashions and trends. But what will be interesting if we can, including for publications, but not just through publications, the idea of exhibition, and other ways of also touching the policymakers.

I think that's also we are, just to share, I don't want to be too off on my side. But we are trying also to re-engage decision makers, as we call them locally, in the work we are doing. For instance, it starts with some of my colleagues because I

managed really to talk to them, and we've even invited them to... I think we had, if you have seen our file, we had an activity. We had this brainstorming activity. And we've invited them. In fact, we invited the reviewers for our MPhil PhD projects and people from across society.

What I mean is that to cut it short, we really think that in two years, of course, hopefully, let's say God willing, we will we come out with some concrete outcomes. We need that, deliverables. But at the same time, I think it can be a new beginning to show that we can add value to design through a new approach and also its value not just in terms of money or just in terms of material benefits. It's also designing for a better world in the real sense of the word.

01:29:55

So, I'm not really sure if you share that or people in the group, you don't have, in fact, to share. But I'm just dreaming a bit. What can come out of it is probably a real, new way of designing where you have something... What I'm saying is more like wishful thinking probably. But I would just want to share it with you because this is what I feel.

DM

That was exactly about these long conversations, we can do lots of wishful thinking which we cannot do normally. So, we do a lot of wishful thinking of this, and we don't really want to presume either of where this is all going. So, it's a lot of coming and going but I think I share, certainly, and lots of the people at Carlton share the enthusiasm for what has been done over the last two years. We did not really know what would happen and we went, as you described, one bit after the other trying to accompany the whole thing in the best possible way.

But I think that's, similarly, at this end, we think that there are things in these 20 projects that are emerging that would be worth consolidating, expanding, building upon because they appear to be interesting and original and supportive. So, thank you for all this. I think I'm going to leave you there, unless there's some stuff that you haven't said, which you would like to say. I mean, I could talk the whole afternoon answering about what you said, and maybe we should talk another day. But is there anything about your project that you would like to add to this conversation?

KE

I would like to thank you, and probably there's just one question. I don't know if you're the right person to whom I should ask this is, some more clarity. It's in fact a complete contradiction to what I have just said, some more clarity in terms of the deadlines and when we are expected to end the project? I am saying a contradiction because at the same time, I don't want you to be too prescriptive.

01:32:35

DM

No, there are ways to close this slice of it which we owe to the funders and then there is leeway. So, I heard you talk about... The whole thing, so your timed your whole project around PhDs that lasts longer than this project, but there is a way to finish and part of it, it will be contributing to the virtual exhibit. So, the thing that you and Kerry and all that have to discuss other where [?] than here is because the last stage of prototyping and testing will be possible only next summer, 2022. Will that make its way in the virtual exhibit?

KE Exactly.

DM Or could we delay your part of it? Or would it be in time for it? And if not, what could be in it anyway? Because it's an ongoing exercise. So, how do we agree on something which would be acceptable without being the end of it? This is the kind of discussion we should have.

KE If I may, to put it in a very simple way, when is the virtual exhibit?

DM We don't know yet. In theory, I think your last report should be sometime in the spring, meaning that then you should be able to provide material for the exhibit. But I don't really know how far... Say you do reports and say, this is where we are. I think that over the summer there will be some leeway to add. This why we need a conversation, you need a conversation.

01:34:16

But now that I know that a meaningful chunk of what you're envisaging will be next summer, what we have to see is would it be possible to enter that part in the virtual exhibit? Or will you have to enter something that is earlier with the promise of that part in it? This is what we could negotiate. I don't know yet. But the whole question of how COVID delayed this is a good reason to delay is just how can we actually make that possible? And if not, the default will be whatever you've done by that date, we'll make it which is enough of interest to be presentable.

But I will indicate that to Kerry that we need another discussion on the timing of your stuff.

KE Just to respond to that. I think probably I don't know, if I put emphasis on this, we are putting lots of resources right now on the project with two MPhil PhD students working on it, research assistant and the staff. So is going to move, let's hope and pray very fast. So, we do, probably will have something quite significant to share with you around summer. Now, is it everything we would like to share? This will also probably depend on other factors.

DM Yes. And the other thing I wanted to tell you, I think you understand it by the way you praise the programme. It is not just me that... There's no need to rush and do a botch job just to meet the deadline.

The other thing I was thinking listening to you is there might be moments where your research assistant meet the two... These crucial moments where the project comes together before it does the next thing, like when your research assistant actually tried to put together the two adventures to produce the next step.

01:36:22

I hope you know that you can ask at that point for Emmanuel or Fred or somebody to be present to enrich the discussion, to listen and to say, oh there, have you thought of this. Or, wouldn't it be interesting for the next bit to include this or to reshape. To do some prototyping with you really, when you arrive at these crucial moments. When you really think of the two together and say, okay, what do we do now? Don't hesitate to call upon the resources of the programme to accompany or maybe even help open up and imagine the next step.

KE Yes. Thank you. I am sure we'll take that into account.

DM You can do all your stuff by your own. But I hope that you understand that there's more than just going to the lab, you can actually say, hey, Emanuel, at this point would be really nice if you would be there, because we're having a crucial discussion. And we'd like to do the next step the best possible way.

KE Yes, thank you. I will recall this because this is something which is always very useful, and they have been quite helpful so far.

DM Good. It was a pleasure meeting you. And I hope we have another occasion to discuss. There's all places where I was saying, star, star, I want to say something, but we should stop this bit. And then thank you so very much for your time. It's been a pleasure.

KE It's been a pleasure. Thank you very much. Okay, take care. Bye.

01:38:03



GENDERED
DESIGN IN
STEAM

IDA - 3D-printed prosthesis to support female survivors of domestic violence, accidents or cancer treatment in Brazil

Interview transcript

Interviewee:

Maria Elizete Kunkel | Principal Investigator

Universidade Federal de São Paulo (UNIFESP)

Interviewer:

Chiara Del Gaudio | GDS Investigator

Carleton University

Date of interview:

27 October 2021

Transcribed by:

Independent contractor

IDA - 3D-printed prosthesis to support female survivors of domestic violence, accidents or cancer treatment in Brazil

Recording time: 00:58:08

Interviewer: **Chiara Del Gaudio**

Interviewee: **Maria Elizete Kunkel**

Interviewer: OK, perfect. Thanks again for coming. I have just one initial question. I would like you to tell me a little about the history of your project. You can start wherever you want. You can talk about as much as you want about what you want, but I would really like to know about the history of your project, from your point of view.

Interviewee: Right. We already have, we already had a project at the Federal University of São Paulo [UNIFESP], which is the Mão 3D [3D Hand] Project. It is a project that makes prostheses for children and adults using technological resources. We develop prototypes, we deliver and we carry out rehabilitation, but this project has never received specific funds, so it has all been voluntary. I have relied on the goodwill of people, to help buy the material and everything else, and we received information that the call for projects was being held in Canada. We thought the call matched our needs, because for Stream Two the requirement was to work with women in need, something that we could help with and do research on involving prototypes and technology resources. As such, we targeted Mão 3D towards providing specific assistance to girls and women who had suffered abuse, mutilation, in cases of aggression, and we included other projects that we already had the intention of doing, but that had no funding. The other projects are breast prostheses for women who have had a mastectomy and prostheses for parts of the face, ear, nose, and parts of the face. As such, there are a total of fifty prototypes that we are making, delivering, and the objective of the project is to develop new prototypes that are more suitable for women in Brazil, because for all these types of prostheses there is information in the literature on how they can be made. Many of them are still made by the traditional method, and we want to involve technology to make a better-quality prosthesis. Out of this information in the literature from scientific articles, a lot is not suitable for Brazil, because, in Brazil, women have a different culture. A Brazilian woman who loses a breast suffers much more than a woman from Europe, she has much more hardship to overcome, for example, on account of aesthetics, and there is also the issue of heat. In Brazil, it is very hot, so a prosthesis cannot be bothersome otherwise people will not use it. In parallel to all this, we are also doing research on gender about what kind of adaptations we can make to these prostheses, considering the gender issue. I don't know whether you want me to talk about some of results right now, or if it's just about motivation first?

Interviewer: Whatever you think is relevant, as for me there is no order, not at all, so just say what you think, what this project is about, how it came about, I don't know, [...] tell us about it.

Interviewee: The initial goals of the research were those. So, we have a team made up basically of women. I think 90% of the team is made up of women, and it is a very interdisciplinary team. We have people from the healthcare area, from the engineering area, and in the field of psychology as well to carry out these studies. And, during this

first year of the research, we discovered many things that we did not have information about yet, for example, the information that women today do not want a prosthesis that imitates their body part, not all of them. There is a group of women who want a prosthesis that is completely different from the colour of their skin, therefore being a novelty in terms of design. We have already proven this in upper limb prostheses, and we are now studying this in relation to breast prostheses, whether a breast prosthesis really needs to be like a breast, or whether women prefer something that gives the breast a shape and is more comfortable, easier to use. So, these are aspects of the research that were not the initial goals of the research, but which emerged as the research progressed.

Interviewer: So, would you like to tell me a little about how the process happened, perhaps, both the engagement of people, the work between you all, in the team, exactly how, I don't know, this engagement happened too with this specific theme, as you said that you had some previous projects, OK?

Interviewee: It came about from the Mão 3D Project because it already existed. The people from Mão 3D Project were automatically included in the Canada project, and for the other projects we looked for partnerships. So, for, for example, for breast prosthesis we want to study, develop prototypes of breast prostheses, but we also want to identify the use of these prostheses in various day-to-day activities, including for playing sports. For that, we partnered with the State University of Londrina as to physical education. As a result, there is a PhD student who is sharing research results with us, and she will analyse women running with this prosthesis, doing various types of physical activities, so we found this specific partner to obtain more information for our research. In my team, there is a student who recently defended for her master's degree in the development of prototypes, so we... after she finished her master's degree we already held a workshop to disseminate this knowledge. As a result, the team at the University of Londrina has now learned how to make prototypes, and they will make and implement them with women there. Regarding face prostheses, we partnered with Curitiba Hospital, which has a researcher who makes facial prostheses using the conventional method, and she already wanted to use technology resources, but she didn't have funding. Therefore, through the project, we bought a 3D printer, we sent it to her, and she is now going to start providing assistance to a series of women who were on a waiting list and had no prospect of being assisted. Then there is another inclusion in the project that I forgot to mention Chiara, which is in the second report. I requested the inclusion of another project within this project, which is a project that had not been in the initial proposal. There is a master's student of mine who is developing a device to measure women's vaginal dilation just before delivery, to avoid mutilation during episiotomy, that cut that is made to facilitate the passage of the baby. Since our project addresses problems related to female mutilation, we included this project, so she is developing a digital device, which is a balloon that is inserted into the vaginal opening and is expanded. She has an application in which she sees if the size of the balloon corresponds to the size of the baby's head, based on information from the ultrasound. My student has already made the first prototype, and we are now starting to improve this prototype in order to achieve implementation. To do this research, we partnered with another campus of the university, with the physiotherapy area, which has a physiotherapy group that works on women's health. They visit pregnant women, and these will be the women who we are going to assist.

Interviewer: So, I have some questions. You say “we”, but who is “we”? Could you tell me a little about your team?

Interviewee: The project team is made up of UNIFESP, the State University of São Paulo, the State University of Londrina, the Curitiba Hospital, and the physiotherapy group from UNIFESP, which is from another campus, but also belongs to UNIFESP.

Interviewer: And do you all usually work with these partnerships? Are these things that arose for the project, have you collaborated a lot with other universities, do you have collaborative projects?

Interviewee: The partnerships arose now after the project was approved, after I saw that I had access to funds, and then I made feasible the possibility of forming these partnerships.

Interviewer: While, for example, this student who joined at this point, sorry, I was made coordinator and now everyone calls me all the time [Laughing], wait a minute, but let's continue, something important. You said that, for example, there is a student who is now going to work with this mutilation that happens during delivery. So, I was wondering how this idea came about, for example, whether she discovered the project and wanted to join, whether something came up among the project team or whether you looked for a student to do it, I don't know.

Interviewee: This student is now already a year into her master's degree. So, she had the idea at the end, last year, right, a year ago, she had the idea of making a device to help women. In fact, she wanted to make a device for pelvic floor exercises, to improve the musculature, and then we saw that there was nothing on the market to do this measurement, and this professor from the other UNIFESP campus came to me, because she had developed a device. It is very crude though. It is a metal object that goes into the vagina and measures it with a tape measure, so when I saw this device I said no, this is from the stone age, we have to make it with the 3D printer, we have to make it digital, and we have to see if it will be more accurate and precise. In the end it was, more or less. She finished her master's degree, she started to make the prototype and when I sat to do the second report I realized that this project is also a project to help women concerning mutilation. While prostheses are made to replace a lost limb, this device of hers will prevent mutilation, for which in the case of vaginal mutilation there is no prosthesis to solve it. It is a serious problem for most women, and then I made this request in the second report and was approved.

Interviewer: OK. And when you said “we” again, was your team involved?

Interviewee: Yes, we're all working from home, you know, because of the pandemic. So, my team in the city of São José dos Campos is me and the master's and undergraduate students. The printers are at students' homes, divided up, the university is closed, and this is an issue that I wanted to find out about. I don't think you'll have an answer for me about this, but we have a problem now because our university laboratory is made up of three very small rooms, but we have always worked in these three small rooms, without problems. However, now, in the pandemic, there needs to be distancing of a metre and a half between students, and this is not possible in these three rooms, so I would like to know whether I could use part of the funding to remove the walls that

partition this room to make a bigger laboratory, in order to get back to working in the laboratory, because this is one of the difficulties we have now, that everyone is at home.

Interviewer: I can't answer that, but I think Kelly is a good person to ask. If you would like, after this interview I can even email her asking, copying you.

Interviewee: That would be good, because a second instalment of the funding was even approved, and my idea would be to use it for this purpose, because the university will only allow use of the laboratory with this distancing, and at the moment that is impossible. We had a single face-to-face meeting with the students to verify, evaluate the prototypes, because the breast prototypes, we need to have the prototypes to see the results, and it was a single face-to-face meeting, but it was at a student's home, not at the university because we can't use the lab. The breast prosthesis project is the one standing out the most out of all the projects I told you about, because we were already doing the prosthesis project for upper limbs; now we're doing it better. It has a greater impact, but the breast prosthesis is a prosthesis made by 3D printing which does not exist in Brazil, and breast cancer is a very serious problem in Brazil. Brazilian women are very concerned about aesthetics, and it really affects the lives of these women, so since we started working with the breast project we started to publicize it. There has already been huge demand from women, television reports, invitations to speak at events. Tomorrow we are even going to do a report with the Globo Network, which is the largest television network in Brazil, because it's something new, it's something new that will really stand out in relation to other projects.

Interviewer: And how did people discover this project?

Interviewee: From the Mão 3D project, we have the Mão 3D social networks, Instagram and Facebook already set up, and we publicize all the projects there in the Mão 3D Project. I publicize them on my personal Instagram as well, but we just held a selection process to look for a woman to work with the specific promotion of this project. So, we have already done it, there are four candidates, we're going to interview them, because we saw that for this project there is the need to have social media devoted to it, because there's a lot of demand. So, we're going to set up an Instagram account, we are going to hold events, livestreaming, and workshops separate from this project.

Interviewer: And I was wondering what the relationship is between the idea behind this research project and your subject maybe, and maybe also your personal life, I don't know if there's any correlation?

Interviewee: Yes, I'm a physicist, I have a degree in physics, but I did a master's degree in bioengineering, which is an applied area of physics in medicine, my academic background, I... Have you been to Brazil, Chiara?

Interviewer: I lived [there for] almost two years, yes.

Interviewee: Where did you live?

Interviewer: Rio de Janeiro and then Porto Alegre.

Interviewee: Right. So, I did a degree in physics in Ceará, in Fortaleza, then I went to USP [University of São Paulo], I did a master's degree in São Paulo, in the state's interior.

When I finished my master's degree, I wanted to do a PhD in biomechanics and there wasn't one in Brazil, so I went to Germany, and then I stayed in Germany for seven years. I worked at two universities in Germany and at the last university I did my PhD in the field of biomechanics, which is the application of physics to the human body and as to the evaluation of the structures of the body. When I finished my PhD, I wanted to go back to Brazil to do projects in the social area. I wanted to combine technology with social impact, which was something new, even in Brazil, in two thousand and twelve. Then when I came back to Brazil, I spent two years working at the Federal University of ABC as a visiting professor and what motivated me to return to Brazil is that Brazil was creating biomedical engineering courses, which are important courses for the development of devices such as prostheses, but this course didn't exist in Brazil. So it's a new course, it's only ten years old now, ten, fifteen years at most, and I was at the university looking for a line of research, not knowing yet what I was going to research, and I saw a video of a South African who had made the first prosthesis by 3D printing, and the university I was at had a 3D printer, so I got in touch with him. It was the first time we got in touch. He gave me the model of the prosthesis and we made it for a Brazilian. So, I made the first prosthesis in Brazil by 3D printing. It was for a man who had lost both hands in a work accident. We made this prosthesis and, when I finished this project with this person, I decided that this would be my line of research, working with prostheses using technologies, and because of my background in physics, I don't have the training to provide treatment to patients. That's why I started to partner up with people in the healthcare area, and then I passed the UNIFESP entrance examination in two thousand and fourteen, but at UNIFESP there was no laboratory, there was nothing. So that printer that UFABC had, the scanner would no longer have access, so I basically started everything at UFABC, we started to cooperate with the company to ask for donations of materials, donations of printers, companies would give me old printers that they no longer needed. We always worked with very limited resources, and that was how Mão 3D started. With Mão 3D, we started to discover that there was a lot that could be improved in these upper limb prostheses. We got started creating protocols, and then a student said, I wonder whether we can make an ear, whether we can make a nose, so I started to supervise undergraduate and graduate research using various resources, but it always started with the 3D Hand methodology. So, this continued growing and now we have several projects, all in the area of prostheses using this same knowledge. Just yesterday, I had a meeting with a university in Germany, in northern Germany. They have a bionics course there, and the bionics course is a research area that uses design from nature to make devices, for example, to study how a spider functions to make a drone, something like that. I got in touch with them because they have some research in the area of adhesives and in the area of structures using 3D printing. So, for example, to glue the prosthesis to the breast we created the prosthesis glued directly to the skin. It needs to be a special adhesive. The adhesives that exist are not good for Brazil because Brazil is very hot. No, they do not stick properly, so at this university they are developing an adhesive based on insects, how insects stick to the wall, and they were very interested in partnering up and cooperating with the prostheses too. So, probably next year, we'll go to Germany. They want us to be able to do a workshop there, present the project, so this is a partnership that has just emerged recently to help with the development of research. For example, for breast prostheses we made a very good model of breast prostheses that looks like a real prosthesis. It's the same, the same colour and shape, made of silicone, only it is very heavy, and most Brazilian women have large breasts, so

they remove one breast, but the other breast is large, so they need a large prosthesis. So, silicone ends up very heavy, therefore we are basing it on this model to make one in the 3D printer which is made of lighter material, but we need to change the internal structure to make it emptier inside, to have a similar size, and less weight. And there at this university in Germany they started doing some research using the shape of the daisy flower. Daisy petals are similar to the way the mammary glands are organized, so we were interested in making contact to obtain this knowledge.

Interviewer: OK. You talked about this too, for example, there are several women who joined, I don't know if they got in touch, but this issue of breast prostheses generates a lot of interest because there is a lot of demand, and you also said that you managed to increase the production of other prostheses because there is a very long wait, so I wonder whether this community, specifically, the fact of you providing assistance, whether there is a...

Interviewee: Whenever we start a certain type of prosthesis, I log onto Facebook and search for groups. Then I search for Facebook groups and then on Facebook I find out that there are WhatsApp groups, which is an application that is widely used in Brazil, and then I join these groups, so I listen to their comments. This happened with my prosthesis, this happened, and every now and then I put it on. We are starting an initial survey that will do this, and then everyone expresses interest, so I get more information from these groups on Facebook than from the literature itself, because what is in the literature is not suitable for Brazil, and those on Facebook are Brazilian women with real problems using prostheses.

Interviewer: These people that you're providing assistance to, these partner universities are providing assistance, are they from, I don't know, a specific context in terms of a specific class? I don't know whether it has any characteristics that it makes sense to point out or not, it can also be of any type, any degree. I'm wondering whether they, for example, are people from a specific background or any type of person, any type of woman who has gone through this or...

Interviewee: No, these Facebook groups are for women who use prostheses. They are not people with technical knowledge. They are women who use prostheses. We get this information directly from those people who use prostheses and many of them are from a very low financial class, so they are people who really don't have any other options for recourse and speak up saying what the related difficulties are. And we have tried to include this information in publications. We started to produce publications about this because there is a lot of information that we did not know, we had not found and now it makes sense. For example, in relation to upper limb prostheses for children, children like to use superheroes, so different superhero colours, but we found out that adults like to use superhero colours too, so we're doing research on that, why an adult wants to make a princess prosthesis, why example, the reason related to this, and then to help children. For example, girls have difficulty knowing what colour, the combination, so we have created a catalogue of prostheses with various combinations to facilitate the choice of design for hand prostheses.

Interviewer: And how does this interaction with them happen? For example, now in this specific project that you are working on with GDS, for example, when they try a prosthesis, how does this interaction and engagement happen?

Interviewee: For upper limb prostheses, we have a protocol involving sixteen steps. This protocol is already very well defined because we used to make prostheses in a more random way, but now we have managed to organize it. For breast prostheses, we are still in the phase of developing the production protocol, so we do not have a protocol for providing assistance to patients, but for upper limb prostheses we do. There's the Mão 3D website, as well as being on Facebook and on Instagram, so people, when typing prosthetic hand in Google, will see Mão 3D. The person then gets in touch and we talk, the person goes to the website and fills out a form. So, in this form the person will attach a photo, a description of the type of amputation he or she has, and then we carry out, we select [with] this form the people that we are going to provide assistance to. Since starting in GDS, our priority has been girls and women, because one of the goals is to increase the number of cases of assistance given to girls and women. Because of the pandemic, we have faced the difficulty of not being able to meet so often. In Brazil, the number of cases is constantly increasing, decreasing. We thought now that it was much better, the numbers are actually better, but my husband had Covid last week, so when we think it's better, he didn't have symptoms, but he had Covid, so anyone can come along and bring the disease. Luckily, before the pandemic, our upper limb prosthesis assistance protocol had sixteen stages and the patient only appeared in the eighth stage. So, out of sixteen stages, the patient only comes in person in the twelfth stage, when the prosthesis is ready. We do everything from a distance, and therefore that was good because it reduced contact and we were able to continue providing assistance, because for upper limb prostheses the patient can take the measurements even at home and send us these measurements because the prosthesis is flexible and it is moulded on the spot when the patient comes in. For breast prostheses, we need to scan the breast, and we cannot do this remotely, so we need to do this in person. So, for breast prostheses, we need to create all patient assistance protocols to follow this protocol, but we'll do it based on Mão 3D.

Interviewer: In addition to this last issue, is there anything you need or was important to adapt to provide assistance to women and girls and not men or boys, I wonder. I was wondering whether you all noticed or changed anything along the way because it was relevant, I don't know.

Interviewee: In relation to upper limb prostheses, we have. In children, it is more or less half and half, fifty per cent are boys and fifty per cent are girls, children are mostly congenital, so they were born without a hand, were born without an arm, sometimes they had an accident, but it is usually congenital. Out of adult upper limbs, most are an accident at work and there are more men, and the cases of women are cases of physical aggression. So, when there is a woman who has experienced a case of physical aggression, this is a great priority, to provide assistance to women in relation to men. We already did that, but with the Canada project we were able to focus more on women to provide assistance mainly to women. We had a case of a woman who was treated, before the Canada project, in which her husband tried to kill her in the countryside outside of Cuiabá and she tried to protect her neck here and he cut both her hands. So, in that way, it was an extreme case about which we always think that it would not happen to a man,

a woman would not go and cut off the man's hands off, you know. So, these types of cases impact us to the point where we say, no, this case here has to have priority.

Interviewer: OK. It's waiting [Laughing]. So, let's say, if I think about how you, about how you've made the process more gender inclusive by giving priority to these women, to these cases and directing the research more in that direction, is that right?

Interviewee: That's right, that's right.

Interviewer: In the case, for example, of this situation of other things that you have added to the process as you have said here, in which you collaborate with psychologists, for example, or these areas, are there any other things in the protocol that you do? I don't know, I'm wondering whether there are any more things you end up doing.

Interviewee: In our protocol for upper limb prostheses, there is a psychologist who follows up from the first contact to the last one, and this was very important to raise issues in the technical area that we were unable identify. She helped with this identification. We are also very careful when a woman starts the prosthetics process to explain to her that the prosthesis is limited, that it will not replace all the functions of the hand, that she it will not have a colour identical to the colour of her arm. So, the psychologist has to do this part, because when the prosthesis is ready, it is a matter of acceptance, because in the case of this woman who lost both hands, they thought that she was a very uneducated person, so she thought it was easy to turn up to the university and receive two hands like her own, or even better than her own hands. When she saw that she had to learn to use the prosthesis, she cried a lot because she said, but I'll have to learn everything all over again. She will, she will have to learn everything again. And in this case of women, when we give her the prosthesis, something that, it is incredible that we didn't know that, but the woman suffered a trauma, she lost her hand, when we give her the prosthesis, she relives the trauma, because at that time when we deliver the prosthesis she really sees what she lost, so that's why you have to have the psychologist along, because sometimes she goes into shock. A child is the same thing. The child has one hand not the other, and children always think that it is normal to be born with only one hand, when they are small. When they go to school, they discover that in the whole school only they have one hand, and then they start to find this strange. Then when they go on a search because they want a prosthesis, when we deliver the prosthesis, sometimes they look at the prosthesis like this and they are afraid to put their hand here, because they always had only one hand, so that's why we need a psychologist. The issue of priority for women, for example, concerning prostheses, concerning upper limbs, I have already explained that. For breast prostheses, it is not even a matter of priority, as women are the one who lose their breasts. Cases of breast cancer exist, but men do not have a breast, so if they are operated on after breast cancer, their life remains the same. For women, there is this difference, and that is why we are, in a way, paying a little more attention to this issue of breasts because it is an exclusive issue for women. And so, the people who work on the project, you had asked about personal motivation, right? My personal motivation is that I think technology resources should be used to develop assistive technology devices so that we have fewer people with disabilities. So, for example, if we think about people who are visually impaired, you are wearing glasses, I wear a contact lens, I don't know about you, but if I take my contact lens out I can't see anything, so I become a disabled person. However, nowadays, glasses and contact

lenses are easy to buy, they're cheap and we find them in many places. But why can't you find a breast, a hand, an ear, which are also just as important. So, these people who lose a part of their body, their lives are totally affected, and if they have a device that replaces that part, they will go on with life again. That is my main motivation, but in our projects, we have cases of people who are motivated because their mother had breast cancer, a brother has a disability, so this ends up being a strong personal motivation. In this way, there is no lack of motivation, it's an easy project to get motivated to work on.

Interviewer: You have just signed off on the project that is also linked to childbirth, but also these others, you have also overcome the issue of prostheses and also cancer, I wonder, for example, whether all these things have somehow changed your previous understanding or issues related to men, women, family, roles, gender, I don't know, I wonder?

Interviewee: Some things yes, some things yes, for example, the upper limb prostheses that we use, the ready-made model that is already available on the internet, anyone can download this model and make it, but after making it for several women we received this model. It is very masculine, so, after doing several, we see that it is a male hand, it is not a female hand, and we already noticed this after doing it for several women, because for men it fit very well, for women it looked big. It looked a little bulky, so we started to change this model when it's a woman, and the last prostheses turned out very well. We even managed to put nails here on the prosthesis, because before it was a kind of male hand, and now we make it a more delicate hand, so if women wish, they can even put nails, so we made this kind of modification. There is not much to think about regarding breast prostheses in terms of gender, despite the fact that there are studies of women using blue, green and yellow breast prostheses, with a completely different design. However, there was one thing that someone commented on and that someone looked for, came into contact for, which was why don't you make prostheses for trans women, because a woman who feels like a man has surgery and removes the breast, and a man who feels like a woman doesn't have that breast. Where does she go to buy this breast prosthesis, usually ours? The central health unit, which is the SUS [National Health Service], does not provide these prostheses, but the SUS performs surgery to remove a breast, so we found this interesting, so we think we will also be able to provide assistance to trans people. It is not an initial commitment of the project, but my idea is that by next year the breast project will work like Mão 3D works today, as a continuous service for women. We will not end the Canada project when we finish, we will continue, always continuing to assist women, because it is even easier to make a breast prosthesis than a hand prosthesis, and that was an insight we had in relation to trans people. There was even one thing that was interesting. There was a guy from the university who sought me out because he wanted to take part in a project, a scientific initiation grant and he is autistic, and he is a trans guy. So, his name was Jane, and then he became Oliver, and then I got him a grant to work on another project. When the grant was approved, I even thought about including him there in the project to work on the models of breast prostheses, but then he said, then I won't be able to work because I had the surgery to remove my breasts, and I was going to put him in the project to work on the prosthesis to make breasts. I said no, you can't [Laughing], you know, so that was something... So, it woke me up, no, but if he removed his breasts because he feels like a man, a man who wants

to have a more feminine body will not get these breast prostheses anywhere, so it is something that we can also include in the future.

Interviewer: And you said that you are still in the production phase, regarding breast prostheses?

Interviewee: Of the prototypes, to improve the prototypes.

Interviewer: So, you don't know yet, for example, how this will change, for example, these women's lives, or their relationships...

Interviewee: We have some difficulties Chiara, because it happened like this, from the moment Canada approved it, we signed the contract. It took months to receive funds, so internal problems here at the university. Canada did not want to compromise, nor did the university want to compromise. Canada said, I'll pay if it's through this bank. The university said, I don't work with that bank. Finally, we found a solution, but we lost funds. We had to do a currency conversion and we lost a good percentage there, but then there came a time when I said, it is better to lose than to have nothing. So, we will lose a part of the funding, but we'll have something, so it took a long time for this money to get here, and when the money got here, it took time to make each purchase I made with this funding too. Therefore, only now have we managed to get the printers, computers. There are things that are still in progress, so we're working a lot with the resources that we had, equipment. Of course, the grants for the students cleared very quickly, so this was very good because the issue of grants cleared quickly, but we are working on the prototypes now in the phase of trying to improve this prototype. Now we have another problem, the pandemic. The women who were going to participate in the breast prosthesis project are mostly still undergoing chemotherapy treatment. They are immunosuppressed, so they are in the group at risk. As such, we cannot call these women for contact in person and the ethics committee won't even approve it if we send for them now. There in Curitiba, the ethics committee has already approved working with women. They will start doing some tests there, but here we are still waiting for a little improvement in the situation. However, I believe that by the end of the year, when the vaccines are finished, the numbers will improve, and then we will be able to have contact in person. For upper limb prostheses, for example, we are only assisting people who live nearby, São Paulo, Rio de Janeiro and Minas Gerais. We are still not providing assistance to people who live very far away, so the person does not have to come on a trip and stay at a hotel.

Interviewer: You mentioned a lot of relative things. At the beginning, you mentioned that you work with several subjects. I wonder, for example, whether you have always done that or whether in this project you managed to do more, whether the understanding, I don't know, of their collaboration changed the potentialities, the possibilities changed over the course of the project, I don't know whether you have a...?

Interviewee: I work with... The university subjects I work with are Biomechanics, mechanical systems, additive manufacturing and health 4.0. I've been directing a lot of the contents of these projects towards the subjects, because now we have more information. That's why even the people in Germany have knowledge of bionics, but they don't have knowledge of prostheses as we do, so we're going to make this exchange for that. So, it turned out that I'm developing much more on these contents, on these topics because of these project activities. It's been very good in relation to this. We have had

many insights, including things that we have seen published, and things that we have seen published wrong. I am starting to find things published. There is a concept for example, which is the concept of trans-human. A trans-human is a person who has something artificial in their body, and most publications in the trans-human area are by people from the humanities. Then I started to read more about it, and I found a lot of things wrong. So, they say that Biomedicine is making prostheses, but biomedicine does not make prostheses. It does exams, it makes vaccines. Biomedical engineering makes prostheses, so we can see that, but they don't know because they are not from the technical area, so I have the opportunity of being from the technical area and of having a lot of information from the healthcare area and from the area of these people's insights. The feedback that people bring us, this is very important. That is not in any scientific article, it is not in the literature. For example, children who use prostheses, right, girls, some have already said that they want a prosthesis because they are ashamed to go out with a stump showing, right, and from the point of view of psychology, they say that women who don't have a hand are more erotic for people who have disorders in relation to this, so there are people, there are people who only find them beautiful, but they are people who are sick. So, there are people, on Facebook I follow several groups of amputee women, and many seek me out thinking I am an amputee, and they keep asking me for a picture because they think a woman who doesn't have a hand is beautiful, who doesn't have the foot, who doesn't have a body part, so I didn't know that existed. So, there was a person who wrote to me and said, are you an amputee? I said, no, I'm not, I'm a researcher, no, but you're an amputee, I would like your picture, then the person sent me ten pictures of me in which my hand wasn't showing, where I was hugging someone, where my hand was to the side. The person insisting that I had no hand and that they wanted my photo. I told them, but hey there's always a crazy person for everything in this world, this is not possible. We did not have this type of information either, you know, so, in a way, a woman who goes out on the street without a prosthesis is exposed to these crazy people, you know? Even that, which was completely new information that we didn't have, because they think it's erotic not to have a hand and to show off a stump here. Then girls say this, children always say this, I don't like it because people look at me on the street because I don't have a hand. Then I tell children, but if you have a hand that is red, blue, green, multi-coloured, people will look a lot more, to which they say, but they won't not look with pity. In other words, we are developing a device that will change the way strangers look at people who have a prosthesis. This way strangers look at them has a very strong influence on their life, so it's not just the person receiving the prosthesis. I have a prosthesis, and because I have a prosthesis I get different looks from strangers. So, for example, breast prostheses, one of the major concerns of women is how men will look at them, if they don't have a breast anymore. As such, one set of research I want to do is to interview men and find out what they feel when they look at women who don't have a breast, and why they feel that. So that isn't in the literature either. So, there's a lot of information that we want to investigate, which has emerged from the project, through this need to understand.

Interviewer: And you said that Covid has posed some challenges, the main ones being these issues of people who need breast prosthesis not being able to have contact with you, and you probably still won't be able to later. I don't know if you can deliver the prostheses. I wonder what other challenges Covid has posed for you or even opportunities, if any?

Interviewee: We are looking for contact with a clinic where we can treat women, a medical clinic. To do breast scanning, we need a big place. We need to keep a distance of more or less five feet and [be able to] move around such person. So, we are looking for a clinic where we already have a patient where we can do this directly in the clinic, because doing it at the university will be more complicated, but we believe that from next year, at the end of the year, first that person will come to work with breast social networks. That person will do Instagram, disclosures, and will call the women, so we are going to make a form, we are going to call the women, and we are going to do it as we are going to do it next year in Mão 3D, select some of them and start making the prostheses to evaluate their use.

Interviewer: Now let's shift a little bit to the program, the GDS Program. I would like to know if you have anything, any thoughts about the influence of the program or the contribution of the program to the process, also negative aspects, I don't know, either, ok...

Interviewee: Go ahead.

Interviewer: The regional aspects, or the group activities, or the newsletter, I don't know. There are several things at issue, if you want to tell me something.

Interviewee: The main contribution of the program is that this type of research that I do, I have always had a lot of difficulty getting funding for my research because it's something very different. We have research in which I'm developing the prototype, but I'm already going to use it on a person and I will have a social impact. People in general think the research is beautiful, but FAPESP [Research Support Foundation of the State of São Paulo], CNPq [National Council for Scientific and Technological Development], they have always given me a very good grade in the evaluation of the project, but I have never received funding, so for some reason that I... And I have been insisting, trying, sending, sending, applying for funding, and sometimes we have got funding from a company. A company said, oh, you need a bigger 3D printer, here it is, it delivers the 3D printer to us. So, Canada was the first project that we were able to approve with funding to carry out our research, precisely because the viewpoint in Canada is very different from the traditional viewpoint. When we saw that it was to work with women, with prototypes in third world countries, developing countries, I said perfect, that's what we already do. So, I drew up the proposal, sent it to Canada, but without much hope because I had already received a lot of nos. So, we were already used to not receiving funding, and it worked, right, so, well, it was a more difficult project to write, because in Canada they had a structure of questions that had to be answered, why this, why that, why that, and many of the questions we had never thought about. What is the impact of design on the gender issue, I don't know. We already did that, but we didn't think about it, so doing, writing the proposal for Canada was research. I had to do some research to try to adapt myself to everything that Canada was asking for, and the issue of Gender Design, we hadn't understood it. When I sent the proposal, I thought it was that, but nobody knew what it was. So, I went ahead and sent it, and it was approved. So, from the moment it was approved, we delved deeper into these issues, so what is Gender Design? I even asked several people from the GDS itself, Raquel, and people said, oh, this is something fluid, it's varied. I said, but someone has to know what it is, because it's not possible for no one to know. That's why Canada is giving me this funding, because it doesn't even know,

it wants me to know, but it was good not to have this answer, because we are building this answer now. So, well, the Canada funding has brought us something very important, which is this chance for us to investigate many issues, because here in Brazil projects are still very subject-based. It is an engineering project and only engineering, ah, it doesn't matter what the person is feeling, you developed the prototype and that's it. Then a healthcare project is just healthcare, it doesn't involve the prototype. So, I have this difficulty approving projects in Brazil, and I have this difficulty publishing the results of our research, because the result of the research is, I made a prosthesis for a child, for a girl I made changes, then there is the issue of gender, the issue of health. No journal wants it, to our publication it says no, this is healthcare. Then I send it to healthcare: no, that is engineering. I send it to engineering. So, we're looking for interdisciplinary journals, but there aren't many, and we ended up having the idea of publishing more book chapters, so I organized a book last year on various engineering topics. So, two chapters are already the result of the Canada project, and Canada's greatest contribution was to provide funding for our work to be truly interdisciplinary. You know, it is so important to have this interdisciplinary vision that when we talked to the people in Germany they were very interested because they want to do something like that too. So, I think that in a way this is something advanced for Brazil still. I believe that in ten years everyone will be working like that, I hope so, but for now it is still something advanced for Brazil. Because of this gender issue, Gender Design, I started looking, researching, reading about it, and then I discovered that a lot of things we do already have a name, someone abroad named this methodology, and we already did it here, but I didn't know what it was called. So, we were already working with Design Thinking. For example, if you look at the Mão 3D protocol, it's all based on Design Thinking, but I didn't even know that was the name. I found out after the Canada project was approved. So, there are some methodologies that we use, are developing, some already have a name, others we are doing, creating. And this freedom to research in so many different areas I think is very good, and it is very difficult to find an institution that does this, that believes that it is possible to do this type of research.

Interviewer: I'm going to say a few things and then I'm going to ask some questions. The question that has no answer, that is, we did not want to impose an answer. We wanted everyone to find their own. It is an emerging area, these reflections on these gender issues in the design process, or in a slightly more complete way, it's not just women, it's not just men, we simplify a lot when designing, but I thought that everyone had to find their own answer, which is what? And I would like to maybe give you the suggestion if you want. We have, it's a congress, but it's about design, Design Society. The deadline is by November 24th, however, but the article can be, I think between one thousand and five hundred and I think five thousand words at the most. I can send it to you later by email, Design Society. It might happen in Spain. I can't remember exactly right now, I think it's in Spain. I'll send you the link later by email. I think maybe it might make sense to send it there or something because it is, I think they might be interested, later [...].

Interviewee: It's about Design Resources, I don't know if you know, it's a methodology.

Interviewer: Design Resources, no ok, I didn't know.

Interviewee: Design Thinking, and there is Design Resources, it is similar to Design Thinking, but Design Resources focuses a lot on evaluation. You have to start doing the project, you have to think about evaluation. Design Thinking does not evaluate much, it talks, it looks to see if it was good and that's it. Design Resources is very good at doing a good evaluation, and then I found Design Resources research related to aesthetics, which is something very interesting because aesthetics is very difficult to measure. How do you measure whether something is beautiful? It is the beauty of something. So, we are researching about it, it would be very interesting, that congress. So, I think it would be very interesting for us to submit a paper.

Interviewer: I think it's the place where a lot of issues can come to light. Taking more space is the first place where things are published, I think it will make sense. I wonder if you have a question, we can move forward, some feedback, maybe some thoughts about either the laboratories, for example, the collaboration with Raquel, with [...], I don't know how much you interacted, or with the news that [...] sends from time to time, I don't know.

Interviewee: Regarding the laboratories, you know, that happened. With the first laboratories we were kind of lost, kind of. We didn't really understand what it was, how we were going to interact, because it was something very different from the type of laboratory or workshop that we participate in, and they were. It was this surprise from the laboratories that made us look for many things. So, we went ahead, started looking for more things about design, about Gender Design, involving more people, and asking ourselves what it was, what it was, and this made it easier. We began monitoring the laboratories better, because we did not understand properly what the objective was, what it was, what was sought in the laboratory, not only because of the language, but because of the strategy itself, which was very different. So much so that in the last meeting that was held, which I think you took part in, right, the one through Streaming Two, specific to Streaming Two, we already managed to have a good interaction with people, present the results. There was a person who presented our results, we discussed them, we managed to improve, implement. So, we are getting a better and better view of what the GDS is, and what GDS' intention is with these projects, and that the projects are very different. So, they are very different projects that are carried out in different countries, with different cultures. So, it's always a challenge to get these people together.

Interviewer: My last question is, how do you see the future through this project, or what are your dreams maybe for the future, what could be possible, I don't know, what do you need, I don't know?

Interviewee: We already had, as I said, we already had Mão 3D. Before GDS, we had just finished doing the 2019 protocols. We did the protocols for Mão 3D, and then the pandemic came. With the pandemic, we started to see that these protocols had to be more flexible, including in order to take this situation into account, and in the future what I intend to do is to have the breast prosthesis project continue. It will be on-going like Mão 3D. We intend to continue assisting people with the university, because, when the Canada project finishes, I will have a laboratory with many more resources than I had before. So, we will be able to assist a greater number of people, and the fact of having this international approval also drew attention to my research group, and that today I have many students wanting to participate in projects. I can't help the students who would like to. Every day someone writes and says I would like, I would like to take part.

So, I believe that when the project ends, it will undergo a big leap, because we will have a better laboratory structure. We will have a group of people with much more knowledge to move forward. The other prostheses too, the one from Curitiba Hospital, which are face prostheses, this is a big challenge because the doctor there is a dentist actually. She makes facial prostheses for parts of the face, but she always used the conventional method. Then I said to her, but you have to use other resources to do it because you will do it much better. So, we are teaching her how to use scanning, the 3D printer, because she has a lot of experience, and she knows how to do it very well, and I know what she knows how to do can turn out very well with the technology implementation part. So, this is a result that was not part of the initial result. We are going to revolutionize the way face prostheses are made, and this will have an impact on the patients on the receiving end. Because of this, we have already written two book chapters together with this doctor, a book in the area of dentistry and another book that will be published by Springer. It has already been accepted, precisely to talk about these issues. The conventional method of making face prosthesis is this, this, but to do it using 3D printing technology, it can be done like this, like this, like this, and we believe then that it will have a good impact. She intends to continue seeing patients there at the hospital after the project ends.

Interviewer: I think that's it, ok. Thank you so much for this interview, it was great, it was great to know more about the project, and also about everything you guys are doing, but also how it came about.

Interviewee: What is your academic background Chiara?

Interviewer: What?

Interviewee: What is your background?

Interviewer: My area is design, design, I did everything in design, I did everything in design, in several areas of design, the first was more [...] design, then I did something more technical, I did design of... It was between mechanical engineering and design, then it went more towards the more humanistic side, let's say social sciences, then...

Interviewee: A lot.

Interviewer: Always in design, but I explored several areas like this. I have a little more technical knowledge and ideas about it, but at the same time things that I research about now are more linked to dynamic issues of collaborative processes, these things, like involving people, I don't know, I'm more interested for this moment, but it's good to know, also to understand that both things are relevant, and design...

Interviewee: I'm more from the technical area, and I'm trying to get more into this area of design and learning a lot. Thank you, huh.

Interviewer: Thanks. And if you need anything...

00:58:08



GENDERED
DESIGN IN
STEAM

ID91 - Studying the use of artifacts to rebuild self-image and identity among female breast cancer survivors in Brazil

Interview transcript

Interviewee:

Débora Ferro | Principal Investigator

Fundação de Apoio ao Desenvolvimento da Universidade Federal de Pernambuco (FADE-UFPE)

Interviewer:

Chiara Del Gaudio | GDS Investigator

Carleton University

Date of interview:

27 October 2021

Transcribed by:

Independent contractor

ID91 - Studying the use of artifacts to rebuild self-image and identity among female breast cancer survivors in Brazil

Recording time: 1:00:04

Interviewer: **Chiara Del Gaudio**

Interviewee: **Débora Ferro**

Interviewer: So, Debora, my first question is whether you can tell me a little about the history of the project. You can start wherever you want, finish wherever you want, and take as long as you want, simply to get to know this project.

Interviewee: Okay, if I start talking fast and you don't understand, let me know.

Interviewer: Perfect.

Interviewee: Because I talk really fast.

Interviewer: Okay, the same as me in Italian, so...

Interviewee: I am trying.

Interviewer: Okay, perfect, thank you.

Interviewee: Well, the project has its origins in my PhD thesis research project, you know. It was already a plan of ours to do the workshops, and when I started the PhD I did not start with that intention. I wanted to work with assistive technologies, but I didn't know what kind of assistive technologies I would work with, and over time I came to understand that the part I wanted to access was the symbolic part of the product. I am from product design. I teach design in the product area as well, and we sometimes have a lot of contact with the practical function of the product and it moves away from this symbolic issue of what this product represents for the public, for the people who use it. And then my intention was to understand how these assistive technologies, which are used by people who have a deficiency, how they reflect this meaning during use. And then I did exploratory research. I got to the part of breast prostheses, and my subject matter came a bit from that, in that regard. When I found out about the GDS call for projects, a friend sent it. We thought about doing the project together, but then she gave up. We were even going to submit it for the first, for the other streaming, streaming two, and since she gave up and I'm still on the PhD program, I thought it was a topic that fit the call for projects well. It made perfect sense in terms of the requirements of the call for projects, especially the opportunity that the call for projects gave for people without a PhD to take part by applying, which was my situation, you know. We have a lot of difficulty with funded projects for people who don't have a PhD. So, that's how it happened. I submitted it, you know, and I got this approval, and that's how we made it to the GDS.

Interviewer: And after that what happened?

Interviewee: So, I'm still on the PhD program, you know, I'm still doing it. We managed, you know, to select two undergraduate students and, well, this has a very significant impact for us as professors, as professors at a federal institution here in Brazil mainly. We are going through, especially now, a very difficult political moment, right, with very

little investment in education. In fact, these investments have been taken away, and nowadays we, for us, this has turned out very positively, so much for us to have students participating in this work involving other professors as well, and we started to do the field study. I'm still, as I said, on the PhD program, so I'm still doing a field study, but they are... GDS and my thesis are moving along side by side, I have made the two converge.

Interviewer: And would you like to tell me a little about the process? What has happened since the project started? I don't know if there's anything that could be...

Interviewee: Right. Are you talking about the Labs we had, the meetings?

Interviewer: No, no, the research process itself. You say this research started, there are also students. Like, what happened, so I can understand a little?

Interviewee: Right. Here we had, we were still in the process of isolation, right. As far as possible, we are in this social isolation. In March last year, there was a lockdown here in our city and it lasted a long time. And, well, that led us to having contact and meetings always remotely, so to this day all the meetings held have been in a remote format, but we started to meet periodically, including before the signing of the contract that only took place at the beginning of this year 2021. The signing was actually only finalized this year, but since, I believe September of last year, we got together as a team to deal with the studies, the bibliography, to do readings, to discuss the topic. So, we have been meeting systematically, me, two other professors from the department I work at who are the Co-PIs of the project, and these two students are also very engaged. And then only in January did we sign the contract. Before that I think we still had Lab One, right, and the discussions were very informing. We had the opportunity to get to know the other projects, to get to know what the other teams are doing out there around the world, you know, teams from Africa, Asia and Latin America. And then, between us, we spent a lot of time on this phase, both of bibliographic review and planning for the workshops, because we had planned to do the workshops in person first. So, we had already got in contact, for example, with public hospitals. I had already done an interview with a plastic surgeon, with a mastologist, in the first phase of my PhD thesis, right. I hadn't even had contact with GDS yet, but I had to have these contacts so that we could carry out the activities in person, and also together with the group that I follow, which is GAAPAC, a support and self-knowledge group for people with cancer. And they are a gateway to other groups that work with the target audience of the research. So, in this period, we also needed to reframe ourselves, because we had to take the whole experiment that was planned to be done in person and we reformulated, redesigned this experiment for a remote format requiring another approach, a very careful approach because we are not seeing people face to face. It's a very delicate approach because the topic we work on is of immense delicacy. We are working with mastectomized women because of breast cancer, some undergoing treatment. One of the workshops, the first workshop that we did, now one of them is undergoing radiotherapy. She has just had chemo, she still has no hair, so it affects this psychological part of people a lot. So, we kind of had to reformulate everything, right. I had to submit it to the ethics committee, and this took some time too, because there have been longer processes, the analysis processes also now. For example, I submitted it in May and the approval came out in October only. So, this gave us a lot of time. We had an initial response, but they asked for a series of adaptations due to the remote format. So, we had to adapt and the response took a

while. So, well, the response from the ethics committee came out, which was now at the beginning of October. We reorganized as a team to promote the first workshop, and by then at this point we had already made a booklet, a digital booklet, but which we intend to print to send to them, with some photography tips, because we also understood that they need feedback from us, and also to organize ourselves in the form of a script of what would be done in these workshops. So that's it. So far, we've had these meetings. We've had a lot of difficulties with the bureaucratic part of the financing, the way the money took time to arrive. It went back and forth, and we don't really have that profile, right, of managing these funds. It has really been a challenge, you know, to understand how this funding logic works, and how it can be used. So, but, well, now we have actually started to put into practice the study of... I don't know if I have answered you Chiara.

Interviewer: You always answer, I'm the one guiding you, maybe to find out something else. I was thinking, you said that this project only began to be brought into alignment, but it wasn't this project that began to be brought into alignment. In fact, you said that this project is part of your PhD research, this topic at least. So, I wonder what the relationship is between this research project and your professional path and sometimes also your personal path, more in terms a personal life. Is there any relationship between these things?

Interviewee: It cut out, I can't hear you, sorry.

Interviewer: OK. What I wanted to say, no, no problem at all, it's important that you can. I was wondering, you talked a little about the issue. What is the idea underlying your project, which is in your project? Regarding this project, the PhD project is aligned with your PhD research, and the project that you are also doing under the GDS too.

Interviewee: Right.

Interviewer: I was wondering whether the idea underlying this project, what is the relationship between this idea and your professional path, and also by way of your personal life? I wonder whether there is any relationship, any, between these things.

Interviewee: OK. Concerning my professional life, it has always been very important for me to do things that make sense, that have a meaning that is really not only practical and commercial, but in a social sense, that makes sense to people, a design that is beautiful, but that is useful, a design that is socially committed. I worked for many years with ergonomics. I am also an expert in ergonomics, and in ergonomics we work a lot on this issue of comfort, of the human being, how objects can be adapted to people, and not the other way around, right. It's always this very lingering discourse. In my teaching practice, I have taught ergonomics. To this day, when necessary, I also offer the subject, modules in the ergonomics degree, and there is a subject in particular, which is universal design and accessibility, which is a subject that I also teach, and through which I have this contact with the universe of assistive technologies, which are products that serve a purpose that is very, a noble purpose, which is to help people who cannot carry out some activities that they do not have naturally. They end up having the ability to do certain things. So, the design was this ability to be useful, to transform, and then my initial focus, as I told you, was to work with assistive technology, but also to understand how this, how the person starts to reframe him or herself based on the object, how I start to see myself in a different way based on what I use. So, we know that objects, artifacts, they have this

ability to make us look at ourselves in other ways. And, in the case of assistive technology, this is very strong. When I have, for example, when I use a wheelchair, it becomes an extension of me. When I use a prosthetic leg, it is an extension of my body. It's part of my body, right, like other objects like glasses, and so forth. So, my idea was to understand this more abstract level of design, not only the practical and functional level, and whether it fits or not, whether it provides comfort or not, but how it also reverberates internally, emotionally. That was the journey, this contact with assistive technologies up to reaching the breast prosthesis, because for me, the prosthesis has a, the breast itself, right, it has this very deep meaning for women, and socially too, perhaps more than a leg, which has this functional side, a leg, an arm, another part of the body it has a very practical meaning. I need my leg to walk, I need my arm to perform certain activities. The breast itself carries with it something very tied to meaning. If we think about the breast other than for [...] breastfeeding, in theory, it would no longer have a practical function for the woman, but it has such a symbolic significance that it continues to be desired. It continues being sought, no, it continues being so wished. So, when I arrived at the breast, it was this sense of going after the symbol itself, the meaning. But, along the journey, I realized that the technology went beyond the prosthesis. It's not just the prosthesis. We have several other things that involve this female universe, that involve the situation of women who have breast cancer. They don't just undergo this body transformation. There are many other transformations that occur during cancer treatment, and then we expanded the scope to examine other objects as well.

Interviewer: For example? Hello, can you hear me?

Interviewee: Hi, I can hear, for example...

Interviewer: What are other objects like that, for example?

Interviewee: Scarves, wigs, makeup, tattoos, other artifacts that are directly related to their image.

Interviewer: And you said that of course, because of Covid, other issues, the process, let's say, it got delayed a little, but you also said that you already sent some materials to these communities of women, women's groups. I was just wondering whether you have already managed to see something about the relevance of this project to the area of research that you are doing for these groups of women, whether you can already perceive something, and also whether you could tell me a little more about them, for example, or some things that, who are they?

Interviewee: Right. We haven't sent the materials yet. We have produced them. We have done the creation part, they're still waiting to be printed, and we're going to send them later. Well, as I said, we just did the first workshop, and the material didn't make sense to be sent before the workshop. Really the logic is, at the end we have this for them as well as a record of what was learned during the process... Well, the women who are participating, the requirement is that they be of legal age, over eighteen years of age or older, that they have gone through breast cancer, and have had some surgery in relation to it, some treatment. In fact, we even excluded the issue of surgery because we understand that regardless of the mastectomy that most had or a part, a quadrant as it is called, right, quadrantectomy, or total mastectomy, but they go through other procedures, such as chemo, radiotherapy, which also interfere with this visual issue and

with the relationship with the body. So, there is no age limit. We have, like, we released the same form for women of different ages. Our initial objective was to work with women from both the capital and the interior of the state. We still really want to get access to some women from the interior. I hope we can do this by December, but we understand that the schedule is also very tight, and many women from the interior of our state have difficulty accessing a computer. Sometimes they have internet, but they do not have skill with technology. So, depending on age, the older, the majority have this difficulty of dealing with the virtual universe, so, well, we really think that there will be a limitation to the people assisted because of this, because the ones we are reaching are women who have access to a computer, who know how to use it, or a cell phone with internet, because you can also see it on your cell phone, but you have to have that, or at least independence because some don't know how, but they want to, they want to do it. So, like, we already know that there will be a slightly different approach there. Even so, we have only had one workshop. We had the first one. There were four meetings of a little more than two hours each meeting, and they showed personal photos of themselves. They later took a photo of themselves at some point. We gave some exercises and they did them and presented them to us the next time. And we had very interesting results. From the point of view of photography itself, which is not quite our objective, to evaluate them in terms of photographic evolution, but we see that there was a very good evolution of understanding light, of using light as a goal, of taking the photo with a message to be transmitted, and also in a personal sense. For example, one of our participants, the workshop was with few people, ok, we are always using small groups so that it is a more intimate environment in which they feel more comfortable, both to talk, tell their stories, both to reveal themselves in terms of image itself, but one of the participants, the first photos of her were right from the side, from the back. They had a more, you know, very reserved reaction, mainly because she is still undergoing treatment, so hair loss is very recent, thinness, you know, she is very thin, and the last few photos she already took from the front looking at the camera. In one of the photos, she shows her bust, not her breasts completely naked, but she shows all that part of the bust, because now there is an expander that is placed before placing the prosthesis, you know. So, for us, I understand that it is a gain when talking about the local community, you know. I understand that they are gains that we are having in terms of thinking. Design not only as a producer of artifacts, as a creator of artifacts, but as a designer with a capacity for a discourse, to produce discourses and to transform also based on these discourses and based on this possibility of giving women a platform, right?

Interviewer: Thank you very much. And I'm going to ask you something about, you also mentioned before that you guys had to adapt everything, the process, you imagined for the online platform. So, I was wondering both in relation to that, and maybe due to other conventions that have happened during the research so far. How did you imagine participation, engagement before, and how has this changed throughout the process?

Interviewee: Ok. At first, our idea was to use two different spaces that we have here. There are many groups here in Recife aimed at people with cancer. There is the Breast Cancer Awareness Month campaign, which is very strong here, right. For example, this shirt I'm wearing is part of a campaign to help a public hospital buy a mammography unit to be able to help women from less fortunate social classes. So, I started to monitor two of these groups. One was GAAPAC, which I already mentioned, and the other group is

a group called Casa Rosa, which exclusively monitors women with breast cancer and women who come from the interior of the state, because in the interior of the state the healthcare system is even more precarious than here in the state capital. So, many treatments that are done here do not exist there. They have to travel many kilometres, often in cars that are not private, to come to the capital and they spend, they have to spend many days undergoing treatment, as they cannot travel to and fro. Casa Rosa is an environment that welcomes these women during this treatment, so they are not, they do not take care of health. They are really an environment for social support, they stay there and stay with a companion, and there they receive food, a place to sleep, all that support. So, our initial strategy is that, to use the GAAPAC space, because they have a physical location, a building where we could hold meetings. Dissemination is really among the groups themselves, because they have a connection with each other. Sometimes a person who participates in a group participates in others too. They are women who are often engaged in different groups, because there is a space for talking, sharing, understanding what is happening at this time of cancer. And Casa Rosa is our way of getting access to women from the interior without necessarily having to go to the interior and, as they stay there for months, sometimes we have this easy access, and in some cases, we actually travel to the interior. Our idea was to hold workshops with about two meetings, three at the most, and they would be meetings with a longer duration, and the initial practices would be during the workshop itself, between them, photographing each other, either alone or with others, trying to make this method a little more relaxed, and they would do some exercises at home for us to share at the following meetings. The method would also involve this, trying to, the discourse would be the same because during the workshops we also work on the concepts of the body, what are the body possibilities that exist, why this body that is in the media? Why do we want this so much, what is behind these structures that move us? But we do it in a very delicate way, we don't use aggressive arguments, involving denunciation. We really raise questions so that they speak, so that they place themselves in that moment, but we also show images of other possible bodies, of women who have been mastectomized, who show themselves to the world, of possibilities other than just that standard body in the media. So that's it, and then what really changed was that we had to have very small classes. They were going to be small classes, but they are even smaller now. We have to hold more meetings because, as there are fewer participants for us to have a significant sample, we need more meetings, and with a shorter duration, because if you take, for example, an entire morning from eight to twelve, we would have four hours. We could take a short break there for a coffee break, something like that, you know, and move forward, for them to even have a moment of socializing. And in this case of doing it remotely, we cannot spend so much time, we really need to reduce the time on screen, so it has been a little more difficult in that regard, you know.

Interviewer: You mentioned at various times the issue of design, what design actually is, what it can actually do. What do you think is the potential of this project for the design discipline? or relevance? you know, what can it contribute to?

Interviewee: To design?

Interviewer: Yes.

Interviewee: So, I think the possibilities are immense, you know. We're talking about a research project that works towards reflecting on what design really is, and on how we can interfere, how can we influence through design, right. I think it brings this deep reflection of gender in the sense that, based on how women are objectified. This reverberates in many ways, in fashion design, for example, both the possibilities that we have to work on, and sometimes our design is a little short-sighted. A bigger vision, I've been saying, we need polyphony, we have to have different possibilities of speech, and discourses that embrace these people too, that embrace women who want a prosthesis, a prosthesis that is comfortable, that is beautiful, that is functional, that is not heavy, in short, that fulfills this role, but a design that also embraces women who do not want a prosthesis, so that she feels in the right not to use prosthesis and even so have a nice bathing suit to wear, and still being able to go to the beach in a bikini without wearing a prosthesis, right. So, the idea of the project, I understand that it reverberates a lot in this sense, of taking these concepts of new theories, to open up space for discussion, to place such a user, such a target audience, you know, really as a priority, and to work on other discussions, not always the same discussions of body with collections, for example, of fashion that are always the same. We are talking here about an example, right. I'm talking about breast cancer, in the breast, but if you think in an overall way in which so many other things, we have this unison speech in which everyone says the same thing, and it always has to be in the same way. Why does it have to be like this, right? Why, as a user, do I have to break the rules alone? Because I don't have people who design also thinking about me, and about these circumstances of mine which are different. So, for me, the effect of design is not simply for the woman who has breast cancer, when I think, for example, about the issue of the female gender, in which as to other aspects we have also been oppressed, and not only as a result of the breast. Does that actually exist, that view of the breast, which has to be a beautiful, perfect breast, neither small nor too big? Where is that size? Are women with cancer the only ones who are oppressed or is it all of us? So, the idea for us really is in the field of reflection. We are indeed associating with the artifact because it is not up to us to go only to the field of psychology and what people think, but how does this artifact directly interfere, to what extent can we put forward new languages through design? Through the product, how can I influence forms of conduct based on this design?

Interviewer: Regarding collaboration, for example, with other aims, I don't know if in your project you have several professionals from different areas. So, this contribution from other disciplines, what does it make you think about design practice or design research?

Interviewee: Well, like Co-Pis, we have two more professors, professor Katia Araujo. All the teachers who participate in the project are... they lecture in the design course. Two lecture here in Recife, and one who joined later, she is not Copiae. She is as a collaborator, her name being Daniela Brack. She teaches in Caruaru at the UFPE [Pernambuco Federal University] campus in Caruaru, which is in the interior of the state, it is rural. But they all have different academic backgrounds, you know. My academic background is all in design. I did a PhD in social psychology. I took a subject during the program on social representations, and I had contact with this part of psychology, which is not that cognitive psychology, which was a part of psychology that I already had closer contact with, mainly because of ergonomics, the part of learning, memory, human error,

and these other factors. But I ended up understanding a little about how social representations work within social psychology. Professor Katia Araujo, who is also with us on the project, is a design professor, but she has a PhD in anthropology, and that's the reason for aiding us with this reading of the part of seeing human constructions throughout history, these repercussions that this brings, our discourses, our practices. Professor Roseane also gives design classes. She is a design professor, but she has a degree in home economics, and her academic background, her area of expertise is in fashion design. She has a, she works with... her PhD thesis was focused on the use of bras. She works with wearability. Today she works on ergonomics but focused on wearability. So, she analysed the physical repercussion of wearing a bra on women who were working. She did some analyses in this regard. That's her academic background, a slightly more technical idea of the product. And Professor Daniela Bracchi, who is from Caruaru, is the coordinator of Fotolab, which is the UFPE Photography Laboratory there on the rural campus. Her academic background is in psychology. So, we have a really good team, despite being from design, just as design is, you know, multidisciplinary, the team too. We tried to bring together these efforts.

Interviewer: And for example, with regard, I don't know if you used to work alone, but in your research were you able to see the specific contribution in the sense of what changed based on the exchange with these people with different backgrounds? I don't know [...] to comment on that?

Interviewee: Yes, I can. Actually, Katia, you know, who has a PhD in anthropology, she is my co-advisor for the PhD, so we were already working together even before the GDS. Roseane's collaboration, who comes from home economics, and regarding this issue of wearability, has a lot [to do] with this practical issue of use, of looking at this product. And Roseane has another issue, in that she also had breast cancer. So, she also helps us. She has helped us a lot with this examination of the stages in which they have gone through cancer, this process they often go through. She sheds light on certain approaches within the project, certain ways of dealing with women, or questions that sometimes we didn't have and later adopt. Before that I had been working only with Katia, you know. You asked if I worked alone, it was only with Katia who was my co-advisor, and in the case of Daniela Bracchi who joined the project later. Her contribution is really in the field of photography, mainly. It was a targeted contribution for the workshop. It really came to contribute with this background that she has of the photo, even in a more technical way, because we were going to do something a little more experimental, in person. We were really going to do something more experimental. Of course, we were going to give some photography tips, but not as much as what we are doing now, so she is really contributing in that sense.

Interviewer: You talked about your workshops, people taking pictures, photographs. I wonder what is the place of making within the project and maybe within what you wanted to achieve?

Interviewee: The photo comes as a form of expression. There are things that are not said. When you do an interview, there are things that are not said. When we talk about content analysis, about Bargan, the content is not just in the words. It is in the pauses, and it is in the crying. It is in the reflections, in the facial expressions. So, the content is much more than words, and photos are a way for us to analyse this content too. So,

during the workshops, we have the moments of speaking, right, because a lot of things come out of that, a lot of accounts that will not come out in an interview, and even more so an interview that is on a single occasion. In the case of the workshop, we have various meetings, and with each meeting that goes by, it is as if we have created a greater bond, as if they end up having greater intimacy too, and they feel a little freer, at ease to talk. So, in addition to the issue of the moment, you know, it provides a verbalization of what is said. Images also talk to us, they also speak with us.

Interviewer: I don't know whether it applies too, but your understanding, I understand that you, for example, the inclusive process from the gender point of view because you are embracing this very complex issue, and you are encouraging certain types of reflection. But I wonder whether there has been any change in the understanding that you have based on this interaction or based on these studies that you have done so far, based on the understanding of reactions linked to men, women, families, roles that they have, or whether you were noticing that some understandings are taking place in these women, I don't know, something like that.

Interviewee: Let me see whether I understand the question. You asked whether, based on our inputs, whether we can, there has been a result, there has been a difference in this understanding.

Interviewer: Have you understood something during this period, I don't know, based on certain reflections, also as a group, as the research group, or readings, or exploration of how to present an issue? Have you arrived at another understanding of the role of women, men, of the roles that we normally have in society? Has everything stayed as it was before, and also can you see that some new understanding is emerging in these women?

Interviewee: Ok then, we still don't have so much empirical data to say, that you can see it and that it's recurring, which has to be reflected on. In the case of these women, we clearly notice in the workshop a difference in positioning in relation to their own body. We notice in the first workshop, although there were few women for us to consider even a pilot, we used the workshop, the first one as a pilot, really, to try, but we realize that there is a change. There is already some deconstruction not of the female role, of the male role, it is not much in that regard, but of her with herself, of her own acceptance, of looking at herself in another way. The cancer itself, apparently from what we have heard so far, also causes this reflection, for example, as most of them have lost their hair due to chemotherapy. We already understand that they sometimes, at least in the initial speech, the fact is that if today I have lost everything, since I had no hair, at some point in my life I ended up with none. At that moment, it was very shocking, for me it was very hard not to have hair, but now I have let go. So, they refer a lot to detachment, detachment from the body, detachment from hair. It doesn't matter anymore, you know. It's like sometimes even in relation to the breast itself, some say they don't have that anymore, that the most important thing is life. It was more important to live, it was more important to overcome it. But, so, in relation to the impact of the workshop, I believe that we can already see, we have not analysed the data yet to see in terms of discourses, the discourse in words, ok, discourse in terms of words, but the photos already reveal to us that there is a deconstruction there, even if minimal, happening, but there is one already, you know.

Interviewer: Thanks. I would like to talk a little bit about GDS, right. I was wondering what the influence of the program has been on work, the contribution, let's say, this can be from different points of view. It can be based on what the regional expert did, or on the meetings you had in Latin America or through the collective laboratories, or on the information that [...] For example, it might be better, I don't know if you have any reflections on the contribution, I don't know, whether positive or negative in relative terms. But as such, what was the relevance or otherwise of the project for your journey, of the program for your journey?

Interviewee: Great, no, GDS influenced a lot through the discussions that were brought to light there, that were introduced to us, even in the sense that, I think that in the first Lab that was proposed for us try to do that synthesis of the project, this somehow helps a lot to put ideas in place, focus a little on what you want to work on. So, I think it was an important experience, you know, in our journey. The second activity, I thought it wasn't, well, it didn't flow so much. We didn't get a lot out of that, maybe because there is a very large group of people. When Raquel proposed our meeting here, in Latin America it was also a very good experience, because I think that we, this language barrier, is also overcome. I understand that English is a language today, well, that is spoken all over the world, but it's never the same for you to speak in your native language. I wouldn't have given you half the information I'm giving you now if I were speaking in English because, really, as much as we try, our vocabulary doesn't allow it, right, this fluidity. So, talking among our people, so, even though it was Portuguese, Spanish, mixed Portuguese, I think it was more fluid. That's the kind of thing that would have been, maybe, minimized if we had, for example, simultaneous translation, despite all the projects, like, in the entire network speaking. If we had simultaneous translation, because in addition to the language itself not being your native one, often understanding is also made difficult by the accent of each country. For example, colleagues from Africa, sometimes I can't understand what they are saying because there is a lot of accent even there, and probably when I speak, some people must not understand either. So, I think that this communication thing maybe got a little mutilated at times because of that, but the Labs were good. It was really nice to discover this diversity, right, that exists as to how many problems we have in common and how many problems we have of a different sort also happening around the world. But, well, I think that for me, personally, the meetings in Latin America, the spaces were more, well, fruitful in terms of discussion. And something that, well, discouraged, I don't know whether I should also talk about the aspect... it was difficult, it was the funding issue, because the process was very stressful and many times we wanted to be focused on the project, but we were trying to solve these bureaucratic issues, because it involves writing emails in a language that is not yours, it involves dealing with problems that you are not used to and that you don't really understand, you know. I made a lot of calls. I think it was Stone and the other company there, really trying to speed up the process. This was a part, well, I would say, that was psychologically exhausting. This was the [...], I say, in relation to GDS only. Here we have had other issues, but of a specific nature, right, in relation to the pandemic.

Interviewer: And did you interact with [...]?

Interviewee: Yes, with Raquel, right?

Interviewer: It wasn't supposed to be...

Interviewee: Ah, Adrian, Adrian Chain, right?

Interviewer: Did you manage to interact? How was the interaction?

Interviewee: We had a meeting only where I think it was right after the first report. We had done the first report and then we had a meeting, but after that meeting we had no contact with them. I thought the project aroused interest in him. I thought the other one had followed, I don't remember her name, a blonde who was with him at the time, too, well, she praised the project a lot, you know. She praised the project a lot, but we didn't have any contact afterwards, and maybe it would be interesting, if that's expected, maybe a call would be necessary, like, from them, to us.

Interviewer: It was a little [...] in the sense also if you wanted to exchange ideas with them, it wasn't finished really because that project needed a different exchange, but that was sort of the idea, too. I don't know if it was very useful what they said there, for example, it was more to do with the presentation. I don't know how that meeting with them went.

Interviewee: In ours there was no contribution. So, on the subject, there were some questions. We talked a little about the project, but there wasn't, like, something that they never remember. They had added, like, these issues.

Interviewer: On the subject, you talked about these more regional meetings. What was their contribution? What kind of space was it?

Interviewee: I believe that in terms of really understanding how other projects are progressing, identifying issues that were not only inherent to our project, really being informed about what colleagues are doing and also perceiving other views, an exchange, for example, of possible authors, at some point Raquel also brought speakers who brought to light some content that was also interesting for our learning, for this exchange, right. I honestly think that for us the greatest gain in this process, at least for me as a researcher, which is research that I had already been carrying out and I kind of made an effort to be able to satisfy this issue in the call for projects, there was the opportunity to include more people in the research, I think that, for me, this was the contribution, but it involves a greater gain, which I think is precisely this network, which is formed, us having contact with other researchers, to understand, perhaps, colleagues that I would never otherwise see or get to know. It is a pity that we have only done this remotely. The best thing would have been for us to meet, have round tables. I imagine that the language issue would also be a little more minimized in this regard, if the meetings had been in person, because there are other forms of speech. I can gesticulate, we try... you are Italian, I think you also gesticulate a lot like Brazilians, right [Laughter]. So, I think it is reduced a little, minimized a little, this difficulty of communication, but, in my view, the biggest gain is actually the network, this contact with other researchers who have an interest similar to ours, you know.

Interviewer: Was the newsletter helpful in this regard?

Interviewee: I saw all the newsletters, yes, but I don't know whether we have gotten closer to each other so much as a result of it, you know. It's more technical information, really more static training. In some way, we had already seen some information that was

in there when the projects were approved. We had already seen how many were presented. So, I personally saw them all, read them all, but I don't know if it contributed as much, you know, in terms of... but it was good to see our project in the newsletter. I think that involves a gain too, we see it officially, right?

Interviewer: And thinking about these things you talked about now, for example, [...] do you have any expectations regarding the final exhibition?

Interviewee: Well, my first expectation, which I think is more of a hope, is that we can do this in person. I would really like to have a moment, like, finally, for us to meet, although I don't know if this will be made possible by then, but whenever we think about exhibition, we allude to that moment, like, of actually showing each other the projects. Besides that, honestly, I don't have the slightest idea. I just imagine many finished projects, a moment, like, really exchanging something that really bore fruit. That is my expectation and I hope it happens.

Interviewer: The last few questions, how do you see the follow-up, the future dates of this adventure, this project, beyond the GDS or maybe what are the dreams for the future in relation to it?

Interviewee: I think about continuing, Chiara, for me both the GDS and the PhD, which I will probably finish at about, at the same time, you know, really closing a cycle. So, in the case of the PhD, more because of the burden of responsibility, because we have to deliver a document. There is a panel, defence, so it has this weight, like, but it's a topic that I found myself suited to a lot. I didn't work with gender issues. So, I started to work starting from my thesis. It is not something that was already part of my research list, and with these vulnerable groups that I am interested in working with, especially the female group, and in this context that we live in and in the context that I, particularly, live in, which is in Brazil and in the Northeast of Brazil, where there is still a very oppressive culture, right, for women, and where the female body is still very objectified, even in advertisements. Even outside the country, the Brazilian woman is seen with that profile of the beautiful woman, naked, and for me it's therefore important to create a platform for these women who are part of our context here. For my personal life, the issue of research is something I intend to pursue. I don't know whether in the future a post-doctoral program or something along those lines. I want to do something outside the country and maybe it'll be a way for us to open some kind of door in this sense of meeting other researchers, someone who is interested in research, a department that works with someone similar, something in this format. So, I think that's it, it would really be these networks that are created, other publications, seminars, things like that. We wish we had done more during this process, but the context we are in it has been very difficult, a pandemic, and gender issues interfere a lot in our context of pandemic.

Interviewer: You talked about the issue, then, of trying to look for other opportunities both to do research and also to communicate, socialize these results. Did you think, for example, in the workshops about what is happening? Do you see any possibility of continuing this, for the sustainability of thinking about it, or maybe not, or are you searching, I don't know?

Interviewee: Yes, we have already thought in the workshops, even after finishing the research, that we have to reduce the amount to wind the document up, but we think

about doing this even with other groups that are not necessarily women with breast cancer, and also other places, and other formats other than just remotely. We hope that soon more people will be vaccinated and that we can have this really face-to-face access, to take the workshop to other places too, right, but the workshop, well, on photography is just a way for us to do it. The idea really is to think of different ways to hear people speaking, to get to know these people, not necessarily based on an interview, which is the most commonly used, it is a tool that is used a lot.

Interviewer: Thank you so much, let me end it here.

01:00:04



GENDERED
DESIGN IN
STEAM

ID57 - Developing a hybrid fish dryer to improve processing for small-scale female processors in Lagos, Nigeria

Interview transcript

Interviewee:

Kafayat Adetoun Fakoya | Principal Investigator

Lagos State University

Interviewer:

Dominique Marshall | GDS Principal Investigator

Carleton University

Date of interview:

5 October 2021

Transcribed by:

Way With Words

ID57 - Developing a hybrid fish dryer to improve processing for small-scale female processors in Lagos, Nigeria

Speaker Key:

DM Dr Dominique Marshall

KF Dr Kafayat Fakoya

DM Good morning, Dr Fakoya. It's a pleasure to see you in Lagos, me in Ottawa, on this 5th October 2021. And the first part of that conversation is really for you to tell me and to tell us the long story of your project for since as long as you can think of and as deeply as you can think of. How did it start? Why did it start? The story of your project, from start to finish.

KF Thank you, Professor Marshall. And thank you to the entire GDS team. How the journey started? Actually, I've been involved with the small-scale fisheries for quite some time. And through my association with Gender in Aquaculture and Fisheries Section and as well as Mundus maris, I've had the opportunity to liaise with fishing communities. I've done some community engagement with them out of research. And I've also had the opportunity to talk with women to see what they are doing.

Because women in fishing communities in Nigeria are fundamentally the processors. They process the fish. They sell the fish. That is, they are found at the lower end of the value chain, of the fisheries value chain. Of course, some of them also catch fish, but not as the way you find men doing it. Predominantly, they are fish processors. And the major way of processing fish is by smoking. They have their own traditional and local method.

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I say traditional because the method has been handed down generations. And then along the way, they've actually improvised some of these traditional methods. That is why you call local, because they look at what is also available in the environment and use it to improvise the technology. You have a variation at times of designs of what they use to smoke the fish. Predominantly, the traditional one is actually clay.

They use red mud to make ovens and that is what they use. But they always are not covered. They are open, over which we have a wire gauze and then you place the fish. That is how they smoke, using firewood predominantly. I thought of, this is what they use. But then over the years or rather decades or years, they've always been battling with inadequate facilities, because what they have is not enough actually to process or smoke the fish when there's bumper harvest.

And then of course, there's also the health implications for them. Most of them get physically worn out because it's an arduous task having to make a fire, stand over it to change the fish, having to pay attention all the time. They have to do that for

hours. I looked at the whole thing that it is a very arduous task, very demanding physically. And there's a lot of occupational hazards that come with that work. In terms of the eyes, they're getting a lot of smoke into the eyes, into the lungs and stuff like that.

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And then of course, for the consumers, there's also this growing awareness about fish that is smoked with firewood. And that the implication is that you might be actually accumulating what you call polycyclic aromatic hydrocarbons. These are chemicals that are in the wood. And because this wood is smoked, it now gets into the fish. And the accumulation of this PAH over time can actually cause cancer. They can actually trigger cancer from consumption.

And then of course, there's also a lot of potential in the fish processing industry, because people do like smoked fish. We have a lot of Nigerians or Africans in diaspora, in the US and the European Union, who love smoked fish. But then there are also stringent rules as to the levels of PAH that is permissible by these importing countries. And of course, knowing that our women are predominantly using wood, that pulls them out.

And of course, because they are not so much aware that there's a huge market out there, they do not know how actually to change or improve the technology. I thought of, why not use an improvement? If you're to combine, use a hybrid, let us harness solar energy. Where in the tropics, we have a substantial amount of sun energy which we can actually use to do part of the drying. Not fully, because another consideration is the fact that the consumers, the local consumers, even those in diaspora, they love the smoky taste, flavour in the fish.

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And on conversation with women who smoke, they claim that the issue of drying the fish with the sun is not going to give them enough market base. It's not going to give them desirable market base. People will not buy such fish because such fish are lighter coloured. They won't have that characteristic brown or dark brown colour and then the taste will not be there. They will not have that market. Demand for such fish will not be there.

They don't actually sun-dry the fish for human consumption, to sell for human consumption. They do however sun-dry some fish for non-human use. Then I thought, the only way to do this, to include their own local knowledge, because they know that they have to produce this fish, is by maybe combining the two methods, the solar with the biomass. But then we also looked at the issue of the wood.

A lot of wood that they use, they use a variety of wood and we want to play it safe. Why not also try to see if we can actually introduce them to charcoal? Because charcoal is much more safer than using wood, which has a higher PAH in most

cases. That was the focal point. And then we actually started with the modelling of a prototype and we noted that we needed to improve the efficiency of the solar aspect.

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And we're actually now at the tail end of making another one. We've agreed on the type of variables that we are going to improve on, the areas. That is the area of the solar collector, we are going to have more of those ones. So that at the end of the day, we'll have more of the solar being able to give us higher temperature than when you use the charcoal. Actually, we use charcoal and then we also use solar.

That is what we intend to use, so that the characteristic smoky flavour will not be lost and the market for these women will be sustained. We're in the midst of doing that now, of constructing another prototype, that you have all this into consideration, will give us a higher efficiency of the solar energy for us to use. And that's the point we are now at, really. I think in another two weeks, I think we should have that prototype ready and then we'll do the testing again.

And that is, afterwards, we'll now do an invitation with the women. Because previous to this, we actually did a survey. We administered questionnaires to see, what are those likely things women will consider as being, according to them, to adopt improved technology? We did actually do that and we came up with very, very interesting results. Even beyond our expectations, we were able to... Because we used Lagos State as a focal point, we assessed different communities across the terrain.

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We have the coastal areas. We have also areas that are more... It's within only a coastal area, but some communities go sea fishing. Some communities do not go sea fishing, but they go lagoon fishing. We assessed both sides of the ecosystem, the marine communities, more or less, fishing communities, and the lagoon fishing communities, because they have different varieties of fish. And then we came up with interesting variations of local or traditional smoking kilns.

I think we had about ten. I was surprised that there's variations in terms of the way they are constructed, in terms of the materials they are used. And that one actually spurred me on that. There's a lot of things that we don't actually know. And the intention wasn't really to discover that, but it's one of the things that we stumbled on. And that is what we intend... We are reviewing the information that we have now, we've gotten now, because it's so much.

We asked questions, not only about what they will consider as important things that they would want to make them to use an improved technology. We also considered their opinion about what they think the cost of wood will be in future, now and in future or before. How was the availability of wood in five years? How

is it now and what's the projection in five years? We want to know if they're sensitive about the issue of deforestation, about wood.

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What do they think? Did they think it would be more available in five years' time compared to this time? And we also asked questions about marketing and distribution. Storage also came into focus. And then we actually asked questions about so many other things, besides the use of the improved technology. We also asked questions about their home front, about the gender roles or responsibilities in the home and what they do.

Because we want to know, how much time do they actually spend doing this work when they are most intense? When do they consider to be the real season when there's so much... How will I say? Preoccupied with smoking? And then what are the means of livelihood when they do not have that bumper season? There are a lot of things we're looking at. And of course, we also asked questions about the associations or affiliations with cooperatives or trade associations.

If they are well integrated, if the women have the ability to make decisions in the whole, if they have autonomy. A lot of things we asked about. What they spend their money on, their income, their lives on. How much income they make, what do they spend it on? And who makes decision on where to spend it? Those were also important considerations. But that's the point we are now. We are just about making the other prototype now that would actually increase efficiency and efficacy of the solar aspect.

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So that we will have much more of that than the biomass energy, because the key point is to make the product as safe as possible and that is by exposing the fish less to smoking by biomass. Because even charcoal has some amount of PAH, but not as high as you find in the firewood that you commonly use. Those are our focal points. And of course, during the survey, the report I got from the field workers was very interesting.

While some communities are not actually open to take up a new technology because they're so much used to stop their use of the firewood. Some communities are happy. They say, bring the solar model. We want to use it. We want something that relieves us of this stress. And I say, look, it is a research. What we have is not for commercial use. It's just a research. We want to see how this thing will work.

But some, they actually want to change their ways of smoking. They want to use a technology that will be more efficient and that will give them less physical stress. Those are some other communities. Even some communities were empowered. They had the opportunity to have received smoking kilns that are fired by charcoal, but then they don't use them. That shows you just the amount of appetite that

some of the communities actually are against the use of smoking kilns that are used in food.

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But then it is not the same story, because we also recognise that for you to carry along the people and the women, it's also essential that you also talk to the men. During the course of the work, I had an opportunity to talk with the men. We had a meeting, the very first meeting we had in the year, because it's a long time we have a meeting. When we had the meeting, when the COVID was actually relaxing, that was in February, we were there and we were able to express ourselves.

Through the contact we had with the fishermen, we were able to talk to the women too. And then I think some of the men, they also helped during the course of the survey. They helped us to link up with communities, because we had very good reception at the interverbal [?]. But of course, some people didn't actually cooperate with us. We had to revert back to the men to give us... The men are the elders [?] of the affairs of the fishing operation [?]. To give us other [unclear].

And they were very well accommodating. They were very cooperative with us. I think even introducing a new technology that is targeted towards the women, we may actually at times need even the other gender, the men. Because they are in the same business, though different nodes of the value chain. To actually help in that transformation. Because some of the men are actually better educated. They will understand some of the points that we are bringing to them.

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And they may actually encourage the women actually to give it some thought. But then another thing that came out of the work survey is that they make so much complaint about inadequate processing facilities. And of course another issue is that a lot of them would prefer to have access to cold rooms and the likes. But then with the precarious electricity supply issues in Nigeria, that is not going to work. The only option that they will have for now is to look at how to increase the production capacity of the processing facility.

And then another way that we want to encourage them is for them to look at beyond the local or domestic market and then look at the opportunities that are bound in the export market. Because I can tell you, quite frankly, that in the EU... I know about the Hygiene Package in the EU. In the EU, the Hygiene Package gives opportunity for the export of aquatic products that are not of aquaculture origin, that are from the world.

If you have the necessary documentation, if you're able to meet the standard, you can actually have a leeway in that way. It's actually a gateway to actually export your product. But of course, they must actually look at the way we can standardise the practices and most especially the way to reduce the PAH. And then you have

to do proper labelling packaging for them to be able to export. But then what they don't know is that they have an edge.

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If only they can look beyond the local market and explore all the outside market. We want to actually also emphasise that beyond looking at the local market, have you thought of exploring the export market? Because it is an open gateway for them. On the other hand, if they went to aquaculture, if they were culturing the fish and smoking the fish, the conditions are more stringent for them than if it were wild fish.

And then they have the opportunity to market the products. I know that there are some people who are offtakers. They meet up with some of the women, some of the communities and they take off some of the products, most especially the shrimps. The shrimps we call crayfish. They take them off, they package them and then they use hand luggage way of exporting this product at times outside to the US or to the EU.

I know that occurs. But then the key point is that the actual producers of these products may not actually know that they are sitting on a goldmine, that this is something that they can actually help themselves to do if only they knew how. I think those are our goals, is actually to help them to improve and standardise their processing practices and also to help them to see beyond the local market and see if they can look at high-end markets, if they can improve the packaging, improving the packaging, the labelling.

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Because one of the team members, actually, she's working on smoked catfish. And that is her area. She's more at home with the issue of packaging and labelling. And then of course, we also have facilitators even outside the team that have worked with the ministries. We are also working with them to know about the standards that are necessary for these women to conform in their own way. We do not expect them to make leaps and bounds.

But then we want to see how we can bring them up to a certain standard. And also because from my previous work, I had one of the women who is very literate. And she has been a source of inspiration, actually. She has been very open. She has been very welcoming. And she's one of those that we intend to use actually to help carry along the other women when we start the training.

When you have somebody that understands your language, that is open-minded, she can actually be one of those women that will help us to bring in other women into the concept we have. I think unless you ask me questions, I don't know what else to say, really.

DM It's marvellous. It's a marvellous story. Thank you very much. That's exactly what I would like you to do, to tell the whole story. Now you've arrived at now, you think

this is where you are now, like you told me. Then maybe I'll backtrack a little and ask you... You told me that you decided to have some intelligence from coastal communities and some from the ones that are fishing in the lagoons. How do you think about the community that you are studying?

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Is it the whole of Nigeria? Is it the province? Is it the locality with these two faces? Which community are you talking about?

KF Thank you very much. Let me just say this, Nigeria is a country. And within that country, we have 36 states. One of the states is Lagos State. Of course, Lagos State used to be former capital of the country, before the capital was moved to Abuja, which is almost in the mid of the whole country. Lagos State is in the coastal area. We are actually one of the, I think, nine coastal states along the Atlantic Ocean. Lagos predominantly used to be a fishing community in those days.

But of course, it's now more urbanised. But then we still have a high number of fishing communities along the coastal areas, along the Atlantic coast. And then with further inland, we have the lagoon systems and which is the most expansive in West Africa. We have many communities also inhabiting now the lagoon system. We have experiences from the lagoon and also from the marine environment, just within the Lagos State.

DM And you wanted a way to study both kinds of environments. And then did you choose two communities that represented that or did you open your inquiry to all of them?

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KF Yes. Because I think from the secondary data I have, I think there are very many, many communities in Lagos State. I think there are over... I think up to 100. They could be, from secondary data. But what we did is to select purposively the communities that we wanted. It is not just by trial and error, because we had to use some intelligence also from our networking outside the team with people from the ministry.

Because they also have the... What do you call? Extension officers. They have fisheries officers. I also use that platform to actually ask about the communities that are more engaged in fishing than others. It wasn't possible for us to actually go around all the communities. But we were able to at least get close to, let's say, I think about 16 communities or so. And the funny thing is that some of these communities, actually, it's like having a town and then having villages within a town.

They will tell you that, no... Because we actually go to a larger town, I would say, or a division. They will tell us, no, this is my community, this is another community, this is another community. They want to be identified like that. We had to give them that respect and identify them that way. In all, I think we had over 16 communities

we were able actually to work with where we actually... And we had such a [unclear].

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Because at times you get to a community, they're not giving you the optimum cooperation, when I was very much in touch with the field workers. I'll just then have to reassign them to another community to see where we get a better response for the survey. We ended up about 16 communities. And as I said earlier, some of the communities, they have varying levels of exposure. And then some have been empowered before, of course, maybe by the government or by NGOs.

They've given the community maybe one or two improved smoking kiln. But then they are not even being used. That is the funny thing. They're not being used. And other communities, they've never had that opportunity. And when they hear about the project, they are very much interested and some of them want to key in. They want to try out whatever you give to them, because they've not had that opportunity of being given anything that could help them.

But then I can say that the communities where we visited, they have strong social networking. It's apparent. And I think, technically, the men are also more involved in what women do. They actually would want to know. And if you're able to talk to the men, to connect with the men who are more or less the hierarchy in the fishing association executive committee, you're able to get across to the women. Because they have a way of calling themselves, of explaining things to them.

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Actually, they actually facilitated part of the success of the survey we carried out. We had visited a lot of communities, not just two.

DM Also, if I go back a bit in your story, I know... Let me just see here. I would like you to speak more about your professional trajectory. How does that project fit from the old story of your own research since you began, if you can replace it? You've already told me a little. I'm used to this came out of my work with such women. But could you focus more on this and talk about your own research over the years and how this project fits into it and your own professional journey?

KF Thank you very much. Prior to this gender design, I've been working on the small-scale fisheries. And then I think it started about close to ten years ago now. My focus on the small-scale fisheries started out close to ten years ago now. And it's been a very wonderful job. And I started with the small-scale fisheries guidelines. Actually, I'd been teaching the course, fisheries management. I was part of the facilitators in school where I teach.

I've been teaching fisheries management. And my aspect has been to teach the students about the small-scale fisheries sector, the different types of sectors that we have in Nigeria. But then the opportunity actually came to do more research when I and one of my co-PI... He initiated that thing anyway. Decided to focus on

the small-scale fisheries guidelines, the voluntary guidelines for small-scale fisheries.

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That is how the actual joining to research had begun. And we were able to network with the Too Big To Ignore. They are based in Canada, more or less. We worked with them. And then we also had another opportunity in the last few years. We were able to do what you call the Illuminating Hidden Harvests, Nigeria small-scale fisheries project. We were key study authors. We got the award, the grant, to actually do that, to carry out the IHH study for Nigeria.

And that is what's alternate of focal area, another milestone for us in our journey. And we are still very much with Too Big To Ignore. We've also had discussions with the Department of Fisheries on the issues of small-scale fisheries and other fisheries sector. That is how this concept about improving the technology for the women actually comes into my professional life. And I think beyond that, I've also been engaged with Gender in Aquaculture and Fisheries Section that is led by Dr Meryl Williams.

And I'm actually the secretary of the section. We call it GAFS. The GAFS section is a part of the Asian Fisheries Society. It's a branch. And also, they've been existing before I joined in 2017, when they thought about becoming formalised. And I was part of that team that transited with them from the informal Genderaquafish to Gender in Aquaculture and Fisheries Section. And I emerged as the secretary.

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I'm still the secretary because of this COVID. We were supposed to have, I think, had another election, but then this COVID also kept us all in office. It's been a very interesting journey. That also exposed me more to the gender issues in fisheries and aquaculture, because the focus is more or less on the small-scale sector. But then of course, there's also differences when you look at Asia and Africa. In Africa, we have more of the small-scale sector.

In Asia, they have more gender issues within women that are employed in the large-scale fisheries sector. The women that are employed in the industrial sector in fisheries, we have more issues with that. But then the issues are much more in the local level in Africa. That one spurred me also to take more interest in the gender issues. What are those factors that actually limit their access to services, to finance or credit?

What are those limiting factors? And what could be done actually to help them? What are those key areas? How do you understand the gender issues? And then I came to understand that the issue of gender is not just the issue of women. It affects both. Because even in our climate, we have some women that are

fishmongers. They're actually very powerful set of women. They control major portions of the local fish trade or distribution.

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And some employ men as the fishers, to be the fishers. Actually, some of them actually dictate to the men they employ the what and what they want, how much they'll buy the fish off from the men or they'll sell to them. Some of the women are actually powerful and they're actually movers and shakers. And those types of women, you find them in other West African countries, in Senegal, in Ghana. They are very powerful women.

But then there's still a lot of disparity. Not all the women are opportune to have the same level of opportunity. The great many of those women are still found at the lower rung of the ladder in Western [?]. And then another interesting thing was that, with my community engagement, I saw that when you look at the houses some of these fisher folks live in, you may want to believe that they are actually poor. But then not all of them are that poor.

They live in such houses, such shelter, because of the nature of the work they do. But then when you talk to them or with them, you will be surprised that some of them actually, they could have better houses elsewhere. And then when I looked at the children living in the fishing communities, they look better fed. They look well fed. They look robust. They look healthy. And that's because they have access to a lot of fish, in and out of the fishing season.

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It's not as if the fishers all over the world are so poor. But it's because they lack some of the essential social amenities and some of those infrastructure that they actually need and make them look as if they are so poor. And I and my colleague have actually been working more actually to help strengthen the collective action of the fishers. Because another issue is that they lack organisational capacity at the national level.

This is just a state. We have about 36 states. The trend is that if they had the voice, they could actually help themselves. Because the Nigerian fisher folks are more or less cut off from the global setting. They don't even know that there's what you call a small-scale fisheries guidelines. And of the high point of the small-scale fisheries guideline has to do with value chain and trade. And the issue of gender is one of the sections in that document.

Beyond that, we just found out that one way to help them is to strengthen the organisational capacity. Everything does fit into the other. They're all interwoven. The small-scale fisheries is what I can call our niche area, where we have actually become well known by the TBTI and also by our work in IHH. It's also been a very good experience.

DM What is your training, your specialisation?

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KF Thank you. I started off with fisheries biology. I had my PhD. I had a predilection for, let's say, fisheries biology. But then along the way, when I joined GAFS, I also treaded towards social sciences, because you cannot discuss gender issues in science without making reference to the social aspect. I had to learn the ropes of how to express myself in social sciences, the social concept, those are the things that I had to learn.

And I found that they are more meaningful than having to write about biological principles or scientific principles. And it's a way of even communicating with the larger society when you're talking about the issues, not just about the fish, but the real issues. That's my training. My training from the onset has been the area of fisheries biology, but I've actually become more interdisciplinary in my profession, in my research area.

DM That's the core of what you learn and you teach. How did you think about the various disciplines in the team for that project?

KF There's a huge diversity. I have a fisheries biology background. I'm well-entrenched in fisheries. I've actually embraced more of social sciences. I understand the issue of gender and also because of my affiliation. My other co-PI, she is a specialist in the area of fish quality, which is actually important. She's running up her PhD. That is Ayojesutomi Solanke. And then we have Professor Boyo...

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DM And what's her discipline?

KF She, I think, settled with food processing, with food technology. She now veered into the issue of fish quality. That is...

DM She's a marketing person?

KF No, quality. In terms of quality, not marketing. In terms of the quality, the nutritional aspects, the practices and stuff. Not marketing. It's also [overtalking]...

DM It's biology? It's still biology?

KF And technology. Because she has a BSc in food technology.

DM Food technology. And that's for Abiodun-Solanke Ayojesutomi?

KF Yes.

DM And what about the others?

KF And there is also Professor Boyo, Adenike Boyo. She's a physicist and she has worked on solar. She has done some very wonderful work with the solar concept, with the solar dryer. And it is actually her experience that I got that from, the concept of wanting to produce a hybrid prototype. She's a physicist and that is her

own area. Then we also have on board Professor Akintola, Shehu Akintola. Two of us have worked together on the small-scale fisheries.

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He also has a background in, I think it's more or less ecology, but he has actually focussed his research area on small-scale fisheries. He's very versatile. He also has an MBA in marketing. He has very good concept of social sciences, of marketing social sciences. He's highly versatile. And he's the frontliner in the area of the small-scale fisheries guidelines in West Africa, in Nigeria, particularly. And then last on the team is Dr Ajelara, Kafayat Ajelara.

She's a zoologist. She specialised in entomology. And she's also worked in areas of looking at those insects that actually are pests in food, in different foodstuff. She's coming in to look at the area of storage and the likes.

DM And that team, Dr Fakoya, did it exist before or did you put it together for this project?

KF I put it together for the project. I and Professor Akintola, we're working together on different small-scale fisheries projects. Similarly, I and Ayojesutomi Solanke, we've actually tried our hands on different projects by writing. We've had some familiarities over some few years. But then for the purpose of this particular project, I brought the team together.

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DM And are these people also revolving around your association or you're the main link with the association?

KF Sorry, with which association, please?

DM You're the secretary of one association.

KF That is gender... No.

DM That's you?

KF I and Ayojesutomi are members of the association. She's also a member of Gender in Aquaculture and Fisheries Section. The two of us are members and I being an executive member. Professor Akintola, he knows about the association. He encouraged me to do gender studies. But Professor Boyo and again Dr Ajelara, they are not linked to the association.

DM We've got another five minutes before we take a break. And I just want to go back to one thing I forgot to ask you. When you thought about which communities you would work with and you did a bit of trial and error, which language do you actually speak to the women that you survey?

KF Thank you. Because the language spoken in Lagos is predominantly Yoruba. Of course, a good number of them can speak some level of English. It will be mixed.

I recruited four field workers that are actually graduates and they also speak Yoruba. And we of course went through training. It was a mixture of the two, because we needed that language, Yoruba language, to actually interpret some things if they don't understand.

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And then of course, being women, they were able to actually assess the information from the women. The women felt more comfortable with the people interviewing them being women. And I think that was a smart choice. It was a mixture of the two, Yoruba mainly mixed with English. Because they have some level of literacy, though it might be low in some cases. But they will understand the message.

DM And when you have a look at the surveys and the results and you think of this flexibility you had with language, does that allow you to capture ideas of gender and ideas of technology that maybe using only English would not have helped capture?

KF I think to some extent, yes. I think it depends on how you... Of course, the question will be written in the survey. Another thing is when you get to the field. Once you understand the level of literacy of the women, of the person you're talking to, then you will know how to bring it down to that person's level. It's important that a field worker should be able to speak at the language of the people so that he or she can make it much more easier for that person to understand. Rather than [overtalking].

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DM How many people did you have in the field to do that survey? And did you train them to do this?

KF Yes, they were trained. We had four ladies and they are all graduates. And we did train them. I sent it as part of the first report, I think.

DM I'll have a look.

KF I think that was...

DM Don't tell me more. I'll go back to this. And why don't we stop here? For you, it will be, I think...

KF 10:05.

DM 10:05 and resume at 10:15. I'll write that in the chat box here. It's been wonderful. I'm looking forward to resuming that in ten minutes.

KF I'm looking forward to seeing you too. Thank you.

00:43:20

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Speaker Key:

DM Dr. Dominique Marshall

KF Dr. Kafayat Fakoya

00:00:00

DM Okay, I looked at my notes, that was a lot of information. We were talking about all the disciplines involved in your project and the variety of knowledge that you brought to that team in particular. And that was unique even if you had some associations with some of these co-PIs before. Here, I'm going to ask you something else. As you progressed in putting that application together and then working through that programme, what might you have learned about how these different disciplines work together? The value of that meeting of different disciplines?

KF What I've learnt is that there is a lot more to be achieved when you have people from different disciplines. There's a way you can actually unleash those resources and mould them into one. So, you have multidisciplinary or you can also make it more interdisciplinary. Actually, we are moulding all our disciplines together into one. We're using our perspectives or knowledge [unclear] from our individual backgrounds and bring them together to have more outputs, which can be interpreted in different ways.

00:01:31

I think we're forging what you call interdisciplinary research because of the diversity of backgrounds and areas of focus on research.

DM Have you got examples of how this time around, you might have tried something new or you might have discovered something new about how, say, the entomologist or the person who specialise in food processing can help in a team like this?

KF Yes. Basically, from the background, the fish quality experts will know more about the nutritional values of the fish we are talking about. When they are processed, she will be able to advise us about how to standardise or to control the smoking process, what should be the ideal time, what should be the ideal temperature, because there is no standardisation yet in the industry. She will be able to tell us what are those things we could actually add to enhance the taste or the flavour in the fish.

The entomologist, she'll bring our knowledge to advise us better on the storage of the fish, for how long do we think we can store the fish in this condition, how do we prevent infestation by insects. What are those things that we need to do, how can we control this. Those are the areas... These are our knowledge where we could actually melt into one.

00:03:30

DM Other question, when we started this interview, you said you had many surprises along the way and you described some of them. You have spoken already about, you could say, a very varied understanding of what you understand by men, women, gender in all that project.

Could you tell me maybe if your idea of gender and technology has changed during that project or if it has been confirmed? Because you've already told me a lot about gender, so if you go back and think only about this, the ideas you started with, have they been confirmed? Have they been nuanced? Have they changed?

KF My idea is that what I've actually seen more or what I perceive is that there's a lot of indifferences among the women, the target audience. I think that could be as a result of intersectionality. We have been talking with women from different classes of different backgrounds, [unclear] classes, different income levels, we're not always getting uniform responses. So, it's not true that all the women are adverse to taking improved technology because most of the literature review I've actually come across, it talked about a high number of women not wanting to adopt improved technology.

And from the preliminary things that we are seeing in the study shows otherwise. It is not a uniform response. There are varied responses. The way they react is also quite different. As I said before, that in some of the communities, a few of the communities, they've had some level of empowerment, they've had some improved technology given to them and they don't use them. They don't even use them. Those things are still there as if they are brand new.

00:05:55

Now, in some of the communities we visited, they're actually looking for something they could receive, they could have in form of empowerment, in form of technology that could actually lessen the degree of the work that they do. It tells us that there is no uniformity among the women. The women are not uniform. It's also clear that they adopt different local methods, too, so the percentage is also different. I think those are the things that we actually came across, actually noticed or found out during the course of the survey.

DM So if I go back to some of the stuff you said before, you've just repeated that some women have not actually used the ovens or the technology that were given to them by other NGOs or public interventions. Do you have a sense of why they didn't use them?

KF Well, they'll tell you that it's the capacity is due, the processing capacity of the facility given to them... It's not as if the NGO gives it to them individually. It's like it could be just one, maybe one of the 200-kilogram capacity or so given to a community or to a group of women. They'll tell you that the capacity is low and what they process or what they deliver is more than that. So, they cannot come together to see how they can even make use of it, they just abandon it. Or they'll tell you that because it uses charcoal, they are adverse to using charcoal. Those are two of major reasons why they've actually neglected to spend...

DM How are you people trying to do differently to avoid situations like this?

00:08:03

KF Okay, that is where the own local knowledge comes in. I was watching the project from the onset because I recognised that most of them are adverse to the use of charcoal in smoking because they claim that the charcoal doesn't give the fish the same taste as the wood and that's the consumers. The customers would actually reject the fish. They won't buy the fish because they perceive the difference. So that is why we said, okay, we are going to see how we can, well I say, transit. Initially, we did use wood.

In the first prototype, we used wood but then we also thought if you use wood, it will also lead to higher levels of pH and we don't want that. If you want to give them a safe product, if you want to introduce them into a safe product, we might actually find a way to come to accept the use of charcoal or we can use charcoal predominantly for the biomass and towards the end of the drying process, we can include some chips of wood.

So, it wouldn't be predominantly wood but we have more of charcoal and then some chips of wood towards the end of the drying process or initially so that the chips of wood will actually infuse the smoke. The chips of wood would actually become infused into the fish and give that smoky flavour. The taste that they crave for. So, that's what we think could help us to cross over the [unclear].

00:09:50

DM So that leads very well into the next thing I wanted to ask you. So, in other way you thought about that project to actually, not only survey the women but also on the men, but also actually make something with them, like, have your prototype and do something to further your research. Could you speak a bit about the role of making the prototype and then a second prototype in the whole adventure of this project? How do you see this bit about making a prototype?

KF The making of the prototype is actually to radicalise the concept of what we intended to do from the onset. The first prototype, which I actually included in my report earlier, gives us an idea of, okay, this is where we have to make the adjustments to increase the efficacy and efficiency of the solar energy and that is also when we started [unclear] the use of charcoal, but I think we may have to use charcoal... How do we win the women over? We think that even giving them the option that if they want to explore higher-end markets, what is actually permissible?

More permissible is to smoke with charcoal other than wood. So, of course, we don't expect a transition to be fast. What we are looking for is, when we eventually start the training with the women to introduce them to the use of the prototype, they would appreciate what we are introducing them to. That the product would not be essentially somewhat different for what they have, but it can be said to be much more safer. In terms of the processing of the fish, the wait is done and the hygiene [?].

I think without the prototype, it might be difficult to actually visualise how the thing would work, how the technology would work and what the outputs will be. I think that is how the prototype actually [inaudible]. That's the whole work.

00:12:15

DM And so have you actually done that kind of thing before to design something, to test it and to train people to use it as a way to make it work or is it the first time that you used such a method?

KF Well, I, as an individual, have not done that before but I know that the physicist amongst us has produced models and prototypes of solar... In fact, our students actually do work on that, but those are more for research purposes. We are taking this step further because of my engagement with the fishing communities. And because I have some women champions and the women in the fishing communities, I can relate it properly. So, because I believe that

research shouldn't always end up in the laboratory, you should learn to take the gun to the town. That is where your research will have fundamental impact.

DM And so far, you've not finished, do you think that this... In a way, for your whole team, it's a new way of working because your physicist colleague had not used a prototype in that way and you never had to use a prototype in your relationship with these communities so this is actually a new thing you're doing altogether. Do you think that the bet is working thing? Do you think so far, it's really something that you think is actually promising?

KF Well, from the preview we had with the first prototype, we've seen where we have to make the amendment and we are doing that with the second prototype now. We did tests with the first prototype. We did some testing on and off without fish. I did that with some students. Okay, let us see how this thing will work. And fundamentally, it gave us a better idea of how to control the temperature because that is also important.

00:14:21

And then another reason why we are looking at charcoal is because, you can easily control the temperature when you use charcoal but with wood, it might be difficult to do that. We are becoming more scientific in our thinking as well. We're not losing the focal point that, as women, we are going to want to train, are not scientists. We have to actually see a way where we can be more practical, oriented in research. In as much as we are scientists, we can let those scientific principles be the things we want to teach them but we also match our own ideas.

So, they are used to wood. They don't use charcoal. They use wood, but we want to encourage them to make use of charcoal. And then of course, we also tell them the dangers and the reason why we don't expect them to leap or jump at the technology at once, which will be a gradual transition. But then it's supposed to be biomass. It's supposed to be solar biomass, not really solar charcoal. We are thinking that because apart from wood, they use coconut husk. They use a lot of other materials. At times, they use rice husk. They use maize cobs, too.

So, whatever they say, at times, they use it to open the fire. We are looking at all those things. But then of course, because we cannot actually expand and do so many tests with the different biomass, we are trying to narrow such with the use of charcoal and then with some amount of wood.

DM Very nice. Okay, so now just one thing I did not understand. Well, you know, this guide that you talked about, which I think was partly written with one of your colleagues, I think it's the physicist, the guide on small fisheries, can you tell me a bit about that guide? Who did it? Is it a governmental guide? Where does it come from? What's your relationship with it?

00:16:28

KF Okay, The Small-Scale Fisheries Guidelines. We actually contributed a chapter to a book that was edited by Professor Atana [?] and Trimpangdi [?] and Professor [unclear]. Those are very big names in the fisheries world, in small-scale fisheries. They are the forefront of the small-scale fisheries as NGOs. It's called [unclear], you know. I and my colleague, Professor Akintola, we actually contributed a chapter to the book. We looked at applying the guidelines. I could send the paper to you, applying the guidelines and a case study in Nigeria, in one of the communities in Lagos State.

We looked at the possible application of the guidelines into the fishing community in Lagos State. That's what we did.

DM Okay, good. So, it's a guideline which goes way beyond Nigeria there. It's an NGO...

KF It's a global instrument that was made available by the FAO. [Overtalking] that I've actually signed to it, including Nigeria, but we've not started implementing the guidelines.

00:17:58

DM Okay. Good, that's helpful. Okay, now a completely different topic. You mentioned it a little, but not completely. You said, you're still secretary of your association because of COVID, because of the pandemic. How else has the pandemic impacted your whole project, all of the aspects of your project?

KF Well, initially, we got off to very slow starts. We got off to a very slow start because then the restrictions have just been lifted and that's when we started. And then of course, when the restrictions were lifted, we started having physical classes. It became much more, I think, forced because there was a lot of arrangements in the way the classes were held. We didn't really have any rest. I think the fall out of the pandemic is that even after the restrictions have been lifted, we still had to comply with the social distancing and the masking.

But then, it really affected the way we used to do things because we didn't really have time to rest in between, from lecturing students to the others. It's really disrupted a lot of things. We're just trying to get back to normalcy. Of course, there's always the fear that you might actually have to go for stricter guidelines, measures, because especially with the Delta variants now. But then, we are still trying to manage the time and everything. We're trying to manage how to balance both the academics and the research together in any way we can.

DM Thanks for that. There's something I did not understand either. This is a detail of what you said. You said there are many women in Nigeria, Senegal and Ghana, who are at the top end on the fishery industry or fishery sector, have you got a sense of how these women got there? How do you explain their authority there or their power?

00:20:13

KF When I said there are many women, I was actually referring to the small-scale fisheries sector. Within communities, there are some women that have become leaders, leaders in their own rights among the women because they're more empowered maybe because they have more access to capital, they're able to employ fishermen to work for them. So, such women are often very prominent in some communities. And then, they play leading roles in such communities. I talked to one of them, I think in Senegal, because they had issues with the government trying to give out some parts of the fisheries to the Chinese to make fishmeal.

Some of the women are in the forefront of the fight against such that. Look, if we [unclear] by the Chinese, a Chinese company or investors, the rights to have factories that are going to make fishmeal out of the fish, they are going to deprive us and our communities, our children from a lot of boats, a lot of food, livelihoods. Some of the women actually become leaders. They have actually become much more heard, even than the men. Some women have actually become champions in their own rights.

Because as a result of trading and marketing of fish and they become empowered in the [unclear], the political and economic strength or capital to be able to rise to the top.

00:22:04

DM Okay. I read a really nice article about this in Guinea, I think, with the Chinese large boats and the fishmeal and, by Lord, I had no idea. In the newspaper, I read the [unclear] recently, but not in Nigeria or Ghana. Okay. Very nice. So now then the other bit I wanted to ask you is about the influence or the nature of your relationship with the gender design programme in general, like from the moment you did your application to the workshops, the relationship with Dr. Matungu [?] in Uganda, the sector expert, the relationship with the two engineers who were the sector experts here.

So, then you have the regional expert, Dr. Matungu and then you had Dr. Imbenyu [?] and then her colleague as the sector expert and then they have teaching assistants and all these and then you send your reports and we have a bulletin, can you tell me about your relationship with this more general programme?

KF I think the person I've actually had more... I couldn't describe it, but I've had more relationship with, is Carrie [?] because I've been living with her. And then I think at that point, it was... Is it Nadia?

DM Najiba [?], maybe?

KF Najiba, yes. Especially during the time when we were having the lab sessions. I've always wanted to have a higher level of rapport or relationship with the sectoral experts. I've always actually been looking forward to that. I thought that when we send the reports, that I was actually looking for their own perspectives on their reports. I want to receive feedback on what they think about the report, what maybe possible advice. That's what I've actually been looking for. Probably, I've been featured twice in the bulletin.

00:24:25

And the second time, I think, I can't remember her name. But she was very enthusiastic. She asked if we pulled some things out to report into the second then I think the addition of the bulletins and I responded to that. I actually want to see more merging from them as well.

DM So the sector experts for you are Vivian Goulian [?] and Owen Rowland [?] and they have not yet given feedback on your report. Is that what you're telling me?

KF Well, I have not really received any feedback. [Overtalking] was sometime, I think, last year when we were told to describe the project.

DM Okay, so I will go back to that. Did you have any kind of conversation or interaction that's had an influence on your project with Dr. Matungu, the regional expert, Emmanuelle [?]?

KF The only time I think I can remember was on the onset, when the team had a meeting with him. He did ask some questions about the process, about if the women were the only people captured and we we're emphatic it is more or less women are fair in West Africa. I think it is not actually the norm in East Africa. Maybe we were looking at a little different perspective that why not capture men. But in West Africa, in Nigeria, women are fair when it has to do with the processing and the training. Particularly in the region where the project is situated.

00:26:24

DM Good. Did you go to any of these workshops? The one at the beginning and then the one on gender design and power or did you miss on that?

KF I attended all the workshops when the project started. Yes, I attended all the workshops with some of my team members [inaudible] attend the workshops. The one that I think I missed was the lab. There was one that came up recently. I don't know how [overtalking].

DM Yes, the lab two. It was one on gender and power. And in the last bulletin, there is a little report on that one. Then there is one coming up, Dr. Fakoya, on prototyping. Have you registered for that one?

KF Yes, I've registered.

DM Okay. Because that will be... To hear what you have done so far, that will be marvellous. What you just told me about where you are between your first and your second prototype and your training and all that, will be a marvellous contribution to this workshop. And hopefully, you'll also be able to learn from what other teams that are doing, prototypes are doing.

KF Yes.

DM There will be, at the end, virtual exhibits. And we're currently trying to design the format of it where we could be able to showcase the 20 projects and what they've done and where they have arrived. We will guide you through this and help and all that, but have you got any expectations for that exhibit at the moment or you're not there in your thinking yet?

00:28:00

KF When would they exhibit come up?

DM We're starting to design the structure of it now and it will come up at the end of the... Like in a year from now, it will be public. And we'll be putting that together mainly and collecting the stuff next winter and spring.

KF I think we should be ready by the end because we are looking at completing the second prototype, put it into use, testing it and put it into use and then actually conduct the training. And then try to facilitate the other workshop to present our findings. So, we're actually looking at it. As soon as this prototype is done and we test it out and we find it to be what we want, I think we'll go on with the other phases of the project. I think by then, we should be way ahead, we should ready and way ahead by that time.

DM Okay. And then you had asked me at the beginning of our conversation about publishing the results of what you found. So, you are in the understanding of the project, welcome to publish these things. You were asking me for venues so if you want, I mean maybe you already have your usual ones, but this is the very moment where maybe it would be good to discuss the news if you wish to avail of the networks of the two sector experts, Doctors [unclear] and Rowland. And I could ask Carrie to actually ask them to talk to you specifically about this if you wish. Would that help?

00:29:47

KF That's a very good idea. Let's [inaudible] options that are really good [inaudible] very good idea.

DM And the other thing is to talk with Emmanuelle as well. I'll tell Carrie about this. I will give her all the recording anyway, but the more practical question you're asking now, we'll see how she can alert the three experts there to your question and maybe you could have an interesting exchange about the venues that you know, the venues that they know, and what might be interesting in ways of publishing. The other thing, and it's the last thing I want to talk about, is to talk about the future. So, I have to tell you that, at this end, when we accepted, at Carleton, to distribute... I've lost your image there, maybe...

KF Oh, yes. I don't know. The audio dropped. Sometimes I put the phone closer to my ear. I can't hear you very well. The audio dropped. I don't know why. The audio volume dropped.

DM Okay. Is it better now?

KF A little bit better, yes.

DM Okay, I can speak louder. At this end, we were given that money to manage at Carleton for 20 projects three years ago. We will finish in a year and a few months and then we have no idea what we're going to do after. If we will just finish all this, make sure that all the projects are fine, that the exhibit is over and that's it or if we will try to support, try to imagine other ways to accompany these 20 adventures in a way that is beneficial for all. So, from our point of view at Carleton, it's been a really nice journey for the people like me.

00:31:46

I'm a historian. I'm part of the main team at the beginning. I document all this and for the experts, to be able to work with people working on gender design everywhere and to have their own students get to know people like your team. But we have no idea what's going to happen next so I wanted to ask you, from where you are, where and how your project might go, but also where and how the kinds of relationships that you have established in our programme might be helpful in the future.

So, the future of your own project, but the possible future of this larger gender design adventure.

KF Okay, that's a very good question. I think I like that. After the exhibition, what next? I think for me, I want to be positive minded. I want to be optimistic that we will actually be able to make some very good impacts with the project and possibly, we could also look at... Go further with it. If I'm able to get the support of the sectoral expert, I think that will also be nice. We can actually look at other higher level research interests, something that could actually improve the whole concept, the whole design.

00:33:25

Overall, I think that would actually be good for both our side and also the Carleton University side. Of course, it's been a very interesting journey for me, too. I meant to learn this process to actually include the gender issues into the designs of the technology. It's been a very good one for us, too. We're keeping our fingers crossed, really, but then I think we also like to see the outcome from our side as early as possible. So, we are working very hard to make sure that we have something tangible to report to the other team.

DM Okay, let me see. So that's all I wanted to talk about. Is there anything else that you think would be nice to say in that conversation to document your project, stuff that has happened or that you would like to report on or you think I've exhausted your memory there?

KF No. I think, from our side, I think you've actually, without thinking about everything, I made clarifications on how we can use our own findings from the survey and the studies. You've actually given clarification on those issues. I'm just looking forward to... I think I want to wait until when we want to deliver this first and then I would be more open to look at other options, more research along that line. And of course, much more [unclear] partnership, maybe between the two universities. I'm also looking towards that, too.

So, I think the next line will be for us to deliver on this first. It is most important for us to deliver on this first. And then look at what other options to explore. I think I'm looking with all, what we've actually discussed. Well, I have no question as for now.

DM Do I hear well that I should not now ask Dr. [unclear] and Rowland to have this discussion about publication, but maybe in a few months when you have finished the cycle of your testing or would you like to have a conversation like that now?

00:35:57

KF I think my own team's conversation, I think I would like them to look at reports first. I think, [overtalking] actually. [Overtalking] the first things I would like...

DM And then later, maybe a conversation about the publication of the results, but now more a conversation about the report. Okay, I'll do that.

KF For the publication, I think we can leave that to... I want them to have a better understanding of what we are doing so [unclear] comfortable if they ask questions. About what [overtalking].

DM Okay, I'll do that. I'll do that. I'll ask them. Okay. So, it's been a pleasure. At my end, as a historian, it's a marvellous thing to do these things. I've learned a lot. So, I hope that the learning is mutual, but for me, it's always wonderful to hear all this. I hope that we get to meet again and I hope that you can make it at the prototype workshop. It will be great to hear that story from that angle.

KF We'll keep it in view. We want to [overtalking].

DM Okay. Thank you so very much and have a good end of your day.

KF Thank you, too. I've really enjoyed the session with you.

DM Thank you. Thank you very much.

KF Thank you. Thank you.

00:37:21



GENDERED
DESIGN IN
STEAM

ID47 - Improving traditional fish drying technology design for women fish vendors in Nigeria

Interview transcript

Interviewee:

Uduakobong Aniebiat Okon | Principal Investigator
University of Uyo

Interviewer:

Dominique Marshall | GDS Principal Investigator
Carleton University

Date of interview:

21 September 2021

Transcribed by:

Way With Words

ID47 - Improving traditional fish drying technology design for women fish vendors in Nigeria

Speaker Key:

DM **Dr Dominique Marshall**

UO **Dr Uduakobong Okon**

DM Dr Okon, very, very nice to see you this morning in October this afternoon in Nigeria. The first thing that we would like to ask you is a very large question, is to ask you to tell us the story of this project from start to finish.

UO Are you asking specifically about the story of GDS, so what led me to GDS?

DM The whole story, as long as possible.

UO I think the story of my involvement in gender design starts from my youthful days. I'll have to summarise it so we won't take too long. It starts from my youth. I grew up in a family. I had a mother, I had a father and four more siblings plus myself. It was mixed sex. At my youth, I was exposed to the fact that there is the man and there is the woman. I grew under my mother, Mrs [unclear], she was more like a model to me.

00:01:51

The experience I have from my family background did not really let me know exactly what goes on in the society, because my parents treated the male child and the female child not equally. I did not understand the issue of gender difference, I did not really from my youth. But as I grew up to understand my mother's profession. My mother was a social worker, precisely a social welfare officer and she was dealing with the public, you know what she's exposed to.

But as I got to understand what she was working on, share her stories, her experiences in her work, I got to know that within the societal context, within the cultural construct of my society in Nigeria. That the male and the female were not being seen as being the same the way we were treated in the family. Because as a social worker, she was settling disputes between married couples and abandonment of the child, abuse of the girl child, all of those. Going to the juvenile court in defence of the female folks, that was most of her duties.

As I grew up to understand her nature of work, I was exposed to the fact that the cultural construct, the social construct of my society was a bit biased or something. All of these, it formed the background for my motivation, my concern for gender, that was the birth, that was the originality, concerned for gender. Of course, my concern for gender shifted towards the disadvantaged gender. Who amongst them is disadvantaged, the man or the woman, the boy or the girl?

As I grew up into my secondary high school, it went beyond my mother's experiences to my experiences at the high school level. My mother was a social worker and as much a farmer. She was a farmer and a social worker, so farming was her hobby. I told you she has shaped [?] my life as a model, so I became

interested in agriculture, that's basic from her, because I go out with her, practicing with her and all of those so I became interested.

00:04:58

In my high school, it was not my mother's experiences from work, it became my own experiences too because as I grew up into the secondary school, it became clearer. It is understood that what happens in the larger society is reflected in the minor [?] society, that's the educational institution, the educational system or something. You could see some boys try to relegate the female child to the background. Because of that, all of this shaped me, it motivated me more towards gender design.

My experiences left me and it extended, I started having empathy for other women in the society. I started having empathy for other girls in the society. I started feeling concern, how they are managing the cultural and the societal difficulties in thriving as a young woman in the society. It now was no more my experience alone. It extended, I tried to reach out to other women and other young girls in my class through our discussions. Then we decided to set up some strategies to survive amongst the boys.

Of course, because I was interested in reading agriculture, that brought me to the sciences. I was in the A class. The B class is for the artists. No, the B class is social science, the C class is the arts class and the A class is science. Because I was interested in agriculture, it's compulsory you must take physics, chemistry, biology and all of those of science, so I found myself in the A class both by my performance and interest or something like that.

00:07:14

As I grew up, extended my empathy to other young women in the society, getting to understand what problems. Measuring from mine, I got to understand what difficulties others were having to try and be successful in the society as much as the male folks. Can I go straight to my professional experience? I became interested in the female gender in raising them up.

I started conceiving how I will grow up to design structures, design programmes, design solution to the fact that the male child in the society and the female child in the society are not ranked the same in various aspects of life. That is what happened at that stage. You are saying what has led me to GDS, as I grew up in my professional experience, my dream became more realistic. Because during my Master's programme, I was working with technology adoption and women, that was my project.

It still tells me I tilted towards the women, so I was growing in my gender design. Even in my PhD, I was also working with women access. I was already captivated professionally, even though as an agriculturist. Of course, in developing countries, women dominate practical aspects of agriculture. It's only at the decision level we have men. I found an opportunity to work with women and also teach women, to work with them, plan for them, design for them. This was much more interesting.

Professionally, the challenge I had was that of balancing my family responsibilities, I became married, and my school, my professional responsibilities. I realised that

I had to, through hard work... I believe in hard work. I believe in perseverance. I believe in determination. You can imagine, I am cooking in the kitchen with my right hand I'm turning my soup and on my left hand I'm punching my computer at the same time. At the same time, I'm answering a call behind me, mummy or my dear, how are...?

00:10:13

I started learning how to combine so as not to let go, so as not to give up. I realised that by God's grace, I have been able to pull through. With time, I started writing papers and undertaking researches on gender issues and agriculture. I did my very first presentation at Mauritius. I left my state and Nigeria, I presented a paper and worked with Ibibio women. I realised that as I grew up, I saw a paradigm shift in the areas of science. A paradigm shift from the cultural construct of my society towards science and technology development.

I explored so much on that and many other papers. As I grew [unclear], in my university, I'm a lecturer in the department of agriculture education, I became the vice chair of the gender policy development. I actually was given opportunity to develop policy for gender management in my university. After that, I think, for one reason or the other, my state, Akwa Ibom State within the society, called me up to also participate, I became a member of the committee, in fact, the secretary general of the Akwa Ibom State gender policy development.

00:11:56

The World Bank needed certain documents gender-wise for purposes of executing certain projects. I was called up to design the gender policy for the state to enhance the working of the World Bank with the state. As you can see, I can't enumerate all, it's been on and on and on. Then it is this interest that brought me to INWES society, the INWES, International Network of Women Engineers and Scientists. With this experience working with International Network of Women Engineers and Scientists as an NGO, attending their conferences.

There's a woman in your university, Carleton University, that really motivated me. Her name is Monique Frize. I don't know if you know her. Professor Monique Frize, she really influenced me, because I met her in one conference in Mauritius and she encouraged me. I became very much encouraged by Monique Frize and all she was doing. She brought me into INWES, International Network of Women Engineers and Scientists. In INWES, I grew up in diverse gender design programmes and all of those. It is INWES that sent me the advert of GDS.

As a member of INWES, they gather research programmes in science, in gender. They gather these things and send to members. Of course, I have served as the board of director two times. Member of board of director International Network of Women Engineers and Scientists, I have served two times. I have worked with the Educational Research Institute there in Canada, where Monique Frize was heading at the point and all of those. I have access through INWES to GDS, through that network to GDS.

Of course, my membership in GDS is not a personal membership, it is an organisational membership. By the grace of God, I was able to pioneer an organisation that is girl related, Organisation for Promoting African Girls in Science

and Technology Education, we call ourselves OPAGESTE. That organisation is registered to INWES, International Network of Women Engineers and Scientists. That gave me a big opportunity to participate and also to influence girls.

00:14:44

We do some programmes, competitions, scholarship programmes for girls and all of that, skill development. Specifically, I'm interested in vocational education, that's my department first, so I encourage girls a lot and work with young women and their profession. This interest and this motivation, in answer to your question, led me to GDS, Gendered Design in STEAM. It used to be STEM, but the uniqueness in GDS is that you have added arts.

It used to be just science, but you added arts to it and I realised that even the arts world can be very explorative too with programmes and gender, not limited to only science alone. It excited me the difference between INWES that is dealing directly with STEM, S T E M and this one dealing with STEAM, including the letter A to make it interesting. It added something to it and I caught the interest and then I started working on a proposal to send to GDS if I could be considered to design a programme in Akwa Ibom State of Nigeria for the women. Thank you very much.

DM Thank you so much. When you think about the community for which or in which you have designed this particular project, it's really your state, is it, or are you thinking of your closer community? When you think about this particular project, do you think of your whole state or do you think of your closer community?

00:16:44

UO In my own philosophy, in my own belief and understanding, we say little by little, one upon the other. Foundationally, I start from my Jerusalem, from my state, from where I come from, and from there it is possible to think of the macro society, to think of the macro system. The possibility of going further to the macro system, as much as I have the opportunity to do so, it is very possible. But for the execution of this project specifically, the one I am handling now for GDS, it was a case study. You take a case study to look at a wider society.

This was a case study of my state to look at the wider society, Nigeria, where we share similar culture, similar societal beliefs, norms and all of those. I just took, maybe use restraint of funds [?] or so, I took a case study of my state to replicate the society to which I belong. You could extend to Nigeria, you could extend to Africa, but it all depends on maybe the funding and the opportunities that prevail.

DM You spoke very nicely about the fact that in agriculture and that this A in STEM, extended your thinking to more disciplines. You're yourself an engineer, if I understand well, an agricultural engineer, is that your profession?

UO No, agriculture is science. It's arts that was added.

DM It's a science.

UO I have taught agricultural science for 20 years in school. Agriculture is science. So, your A is arts. In my design, I try to make it artistic as well because it will be appreciated because you have the art as part of your concept.

00:19:07

DM What I wanted to ask you here is how do you think in this present project of the relationship between the disciplines involved? Because you put a team together, so how do you think about your agricultural science and all the other disciplines that feed into this project?

UO Having to talk about the diverse disciplines in GDS, it's very interesting. In academics, of course, we appreciate interdisciplinary researches. I really appreciate the fact that STEAM is interdisciplinary. You can bring in diverse disciplines to execute a project. It's quite interesting and is exactly what I was doing. In the constitution of my team, I have the architects, I have the agricultural scientists, I have the builder. Of course, I was looking at the belt environment and I was looking at the design.

All of those things, we bring them together to create a wholesome concept. I think it's much appreciated science, technology, engineering, mathematics, of course, you cannot deal without the mathematical concept. In fact, I appreciate the interdisciplinary aspect. Another thing that this interdisciplinary concept brings is that you learn a lot. You're open to learning from some other disciplines you don't belong. If you're working with an engineer and you're not an engineer, you learn so much from the engineer.

00:21:01

You're working with an artist who is putting the drawings together, you learn so much from it. This interdisciplinary aspect of STEAM is so much well appreciated because it gives opportunity for learning and gaining more knowledge in other disciplines. It expands your experience.

DM I know it's still... Listen also Dr Okon, anytime you want to stop for a little to take a break, you tell me. We can stop for ten minutes if you need to. Have you got examples along the few months that this project has been lasting, where putting together of different disciplines brought you to think something new, like it made for something that you hadn't done before or you hadn't seen before?

UO Yes. I think I'm saying the same thing. The interdisciplinary aspect of the GDS programme makes room for you to learn new ideas from other disciplines that is only related, they're not directly your discipline. For instance, in this project as an agriculturalist, I am working with some consultants that are architects, that are engineers to look at my design, that are direct designers.

I am providing the information and the overall guidance from my experience in fish technology, fish design to them. They don't know that much. You realise that they will be learning from me as much as I'm also learning from them. It opens the opportunity for new knowledge to learn.

DM As you did over the last, it's almost two years now project, and we have another year to go, I know you're very experienced in all this, but has it changed or make progress your ideas about a question of men, women roles in the family? Have you discovered things as you were doing that particular project or has your understanding changed?

00:23:45

UO During the project?

DM Yes.

UO Of course. My experience in the university, you're working with male folks. Here is the woman coming up with a grant from Carleton University, maybe an opportunity one or two men have not been able to reach, so there could be that dullness in responding to you, in creating access that it does not obstruct. Such experiences does not impede you, stop me from progressing. You just realise that you observed dull attitudes from your environment, perhaps because you're a woman or something like that.

It does not impede the progress of the design in any way. Why? Because, personally, I have risen up to a leadership position. I am the head of unit of agricultural technology education in the University of Uyo. Even if you're a man under me and you don't like what I'm doing, there is nothing or little to say or something. You could observe from the environment some form of restraint that at this stage of my life does not really matter anymore.

Because I have risen to some point, even though I'm not at the peak, but at least by God's grace, I'm going. I have had such experiences around. Then in this project, at a time we had to go for fieldwork. My project with GDS, it's very, very unique. Why? Because I am taking a case study, and the case study is feeding my prototype alongside with the development of the prototype.

00:26:13

I did not receive the scholarship at stage two direct. I received to work a case study, and then based on the results of the case study, I developed a design that will fit the women. To be very frank, I don't have much constraint. My society is a bit enlightened in gender. If one wants to talk about it in gender issues, my governor is a gender loving governor. In fact, the commissioner for agriculture is a woman. I have been working with her.

There is no restraint whatsoever. You can only see an informal attitude from the male folks that you may want to send for one thing or the other, which does not really matter. I don't know if you've gotten the gist. Understand?

DM Yes. You told me a long story of how you came to want to work on issues of gender. The way I heard you, it's really a story of an expanding scale from your circumstances at home to the school to the society around you. All the while, has your understanding of the role of gender changed or has it just slowly been confirmed? Have you come to see these questions differently not only for this project, but has your view of gender changed or has it pretty much been the same since you were little?

UO Yes. Since you are not talking specifically to the project and referring maybe to the society or something, like I told you earlier, there was a research work I did that had to do with paradigm shift of women towards enlightenment. The role of gender, it has not changed, but it has grown, it has expanded. The females have come to know more than what they knew in the earlier dates. The roles, it's not interchanged with those of men.

00:28:48

Men in these days have learnt to share their responsibilities with the women and the women have also learnt to share their responsibilities with the men. Even though there is the societal expectation of the woman, there is also the societal expectation of the man. As compared to the earlier days, these roles, they are growing and they are expanding, even though they have not changed. The woman is coming into more responsibility because she could be appointed a leader that never was in the earlier years. It is still her role. It's not as if the role has changed.

It has grown and has expanded and they are now closer to the male counterparts in their responsibility too. As the years roll by, the gap between the man and the woman is getting smaller, even though they are operating in their naturally given responsibilities and acquired responsibilities and the rest.

DM From all you've said about what you're doing for trying to include more girls in science and interest more girls in science and giving scholarship probably to girls who have less means to come to science. You're very well placed to talk about what are the impediments to girls participating more in science or towards science which takes more girls into account.

00:30:39

Maybe you could talk to me a bit about that. How has your idea of maybe the barriers towards a more gender inclusive science, what's your idea of this and has that idea changed about the barriers of...? Because you are really...

UO The barriers?

DM Because you're working to lower these barriers. A lot of your work is to attract more girls to science and make science more gender inclusive.

UO You're right. These issues, you must get to understand that the positive and the negative as far as gender is concerned, they go along together, even though some individuals like me and some other women are striving to break these barriers, to work against the tide, as far as the societal construct is concerned. Even though this is being done, there is still some restraint, there is still some levels of barriers, especially when it is considered at various levels.

At the junior staff levels, at the senior staff, at the leadership rank, there are still some challenges, some problems, some barriers. Such barriers, though not restricted to GDS project that I'm handling, it's not restricted to that alone, it expands to outside projects. When you are designing for the female gender, and every time the men hear female, girls, woman, it raises some concerns in the hearts of the men. I don't know how best to say it. I know how to say it, but how best to put it to your understanding.

It's not formally, informally there would be some sense of jealousy. There would be some sense of every time the woman, every time the girl child, what about the boy child? This poses some restraint to you, the designer of the project. It may not stop you. You may not totally stop or withdraw, but you do it with some sense of difficulty, some restraint to pull through your gender design project because of how the male may feel about it, why is it all over?

00:33:57

At the United Nations, they are interested in developing the female, because many times because the women are a disadvantaged gender in most societies, especially the African society. But many times those of us that are fighting against this bias, we have some restraint from the male folks. It doesn't stop us that you have some restraint because they do not see or believe or realise that the female folks are disadvantaged. They don't believe it.

Maybe for religious reasons, maybe for cultural reasons, maybe for personal reasons, maybe for whatever reason, they do not understand your fight. They feel challenged as if you're coming on to challenge them. It's not a challenge, it's just working to help the disadvantaged one. It's not a challenge, it is a call. It's rather to me, a call to work together, a call to be carried along with what the males are doing, a call to share on equal footing. It doesn't have to do with a challenge of authority or something.

Those are all unhealthy competitions. If you come to an equal playground, the restraints would not be there because there will be the understanding that you are seeking for an opportunity to create some sense of assistance, some sense of equality. Some sense of creating opportunity for this other ones to grow alongside with those ones that have already grown. It's not a matter of competition, but this has much to do with the culture of the people. It has much to do with the culture, with the social construct of the person.

00:36:26

Another problem we have in gender design is that of conservatism. Generally, you find out that women, they're conservative, not easily open to change. While you are driving this change as a leader, they find it much difficult to understand why you should ask them to go along with the men. They find it much more difficult, maybe for some reasons that may not be explained within this context. But there is that conservative attitude. Then we also have at certain levels, like I told you earlier, that the answer to that questions are in levels.

There are levels in which you exist and you are actually intimidated. You face intimidation by the male folks, it happens. It is not at all levels that any man could just walk in to intimidate you. But there are levels, especially when you're driving at the junior levels, you could be intimidated and you withdraw, you go back from what you wanted to do. Some are really. We have these barriers that, since officially, especially in my state, our governor is a gender loving governor.

Can you see, I was called upon to develop the gender policy for the state, so that some women development, empowerment programmes could be executed. This is an official covering. But under this official covering, a lot of things happen informally behind the background when you are interacting with persons and working with persons. But all the same, there is huge success as far as gender development is concerned in my society.

00:38:48

I strongly believe, like in this GDS programme that I'm handling, as we were interacting with the women, in fact, we invited the men. We invited a few men to be amongst us to understand and go along with us in what we are bringing into the society. We are bringing in an innovation, a design to assist the women. We

cannot come from nowhere.

We have to appreciate both the male and the female gender in the society, so the female could be allowed to operate and receive the assistance so their capacity can be built as far as the innovation is concerned. I don't know if I have satisfied your answer.

DM Very much. That's very interesting. You said that you did your case study and then you started to work on a prototype. I wanted you to stop a little to think about how making something has helped your project, the role of making something in this particular project. Is it a new way you're doing of making a prototype or this is your regular way of working? Whichever way, what does making something help you do when you do projects like this?

UO A project like this? Yes, I was undertaking a case study for the past few months, I'm about rounding that off and we have made a lot of input on the prototype. Based on the opinion of the research participants, based on their likings, based on their cultural background, the historical background, all of it has to be considered in building the innovation, a new machine for them to use. Personally, coming into this new design, I have had a number of other designs. I have designed gendered design projects before I came into GDS.

00:41:12

But the GDS, gendered design project that I'm handling, I'm working with the designing fish drying facility improving the traditional design for the women. Fish drying is an occupation that is dominated by women so that's why I chose it. You rarely find a man going to dry fish and to sell in the market, very rare. Even though they're there, but very few, insignificant. You realise that designing for these women gives me a new experience.

I have not designed an innovation for women in fish projects before, so it's quite a new experience and I'm gaining this experience, I'm equally learning. Even as the principal researcher, I'm equally learning because I have not designed this exact project before. Even though I have done something similar, but it's not exactly this. Coming into designing, improving technology for women, fish vendors, fish processors in my community, fish marketers, developing this project for them, asking them some questions and they make the input in the innovation.

It's very interesting, it's something quite new to me. I've not had this approach of combining a purely scientific and engineering project with a case study. An artistic aspect of it, the social aspect of it, combining it with scientific aspect of it, it's quite interesting.

DM Because you're starting from a technology that exists and you want to improve the fish drying, is part of what you're doing allowing some traditional knowledge to be put to the fore? Is your case study bringing some knowledge that these women have to the fore or is it all new knowledge?

00:43:41

UO Yes, you're right. It's bringing certain traditional knowledge to the fore. Dominique, when we went out on the case study, we have women participants in all the senatorial districts of our state, and we gave them opportunity to express. We

interviewed the leaders. We gave forum for open discussions in focus group discussion settings. An opportunity was given to them. Through the researchers interaction with these women participants, we have realised that you cannot work without understanding the cultural background in fish production.

You cannot work without understanding the social construct of fish production, you have to. We realised that the women were... The cultural aspect was brought to the fore very much. In fact, we started the case study by investigating the historical antecedence of fish production in Nigeria, in Africa, and specifically in my state. They were given the opportunity to trace the history. If you watch my videos, they themselves were answering, my mother used to do this and my father used to do this as far as fish production is concerned.

This is that, and you can't discard that culture and go ahead to do your science. You don't discard it altogether. You have to fit in the cultural background into your science, into your innovation, into your scientific facility. They were given the opportunity to express their problems. Now, specifically to answer your question, bringing the cultural norms or the cultural aspect to the fore. We realised that some women, during the case study, were interested in maintaining the aroma of the dry fish in our new facility.

00:46:22

The aroma of our product should not smell differently from what they have had before. We were not interested in bringing scientific changes and technology to what will change their appreciation of the fish product after the drying. This was considered as we were designing the machine for them. We were also considering excessive heat. Actually, before I sent the proposal, I did a pre-study of visiting the traditional fish drying settings around. We have some pictures. Visited the traditional fish drying settings around to understand what their problems look like.

If you do not understand what their problems are, then what are you solving? What are you working for? What are you researching for? That had to be even before we sent the proposal to GDS. We now call them in the case study to understand and then have them to confirm what these difficulties are. Then we base the design of the facility in the belt environment to suit and alleviate these difficulties, health-wise, economic-wise, security issues and all of those.

We have to address all of those issues in the belt environment and the facility we are trying innovation we are trying to bring. All of these focus on culture, it has so much to do. We can't eliminate it. We must carry along a part of our culture to our scientific innovation. Very important.

DM As you put together this particular project, the case study and the prototype, how did you design the case study? Is that the method you were used to or did you change your usual method?

00:48:43

UO Sorry, I was using generator because of power failure. It's like my generator is developing some difficulties, but the laptop still has some battery power and we can go on.

DM Good. I'm glad to hear that.

UO We can go on.

DM Let me know if you want to have a pause, Dr Okon, but I'll assume until you ask me that I can carry on.

UO Carry on please, especially now that the laptop is on and we can achieve something.

DM As you designed the case study for this particular project, did you try a new method or is it a method of case study that you are used to?

UO I tried some new methods. I have not had a case study that I have had to cover the whole state, that I've had to bring in different sectors of the participants. Bringing an innovation to the community, we had to see the leaders of the community, both male and female. We also had to consult with even the political leaders and ask them that this is what we, the researchers, academics, this is what we are coming up with. I've not had that. It's a bit new or strange or is a bit new, I was learning so it was a learning opportunity.

00:50:22

If you look at my pictures, you'll see the mass of women that came out to express their views, to express themselves as per the innovation that you are bringing in and making contributions to the innovation that you're bringing in. This is quite interesting. I think I have not had exactly this before, but some things similar to it. The GDS has given me an opportunity to go wider for my experiences.

DM As you put together this all very interesting way of working, did you read or ask people have done that before? Where did you take your ideas to do this?

UO I can't say that some of the ideas that is playing now in the GDS design is gotten from my former experiences. I dealt on it, I developed on it, I furthered, I advanced the experiences, is born from some... You are also right. I had opportunity to discuss with some people, some experience, some experts as per what exactly should be in the case study. I did not just jump into it with all sufficient idea from myself, no.

I also made some inquiries and obtained information from some experts around me. I also had so much to build on my former experiences, built on it, advanced it and brought in some new ideas to make it perfect.

DM May I ask, who were these experts? What kind of experts did you consult? Because I've heard about your former experience, but who else did you bring in or who else did you ask?

00:52:36

UO I visited some fish experts. I visited the fishery department. I visited the zonal director for fishery in the state and her ideas were added. I also visited some academics, some professors in this area that would give you some tangible ideas as per their research aspect and the technical aspect as far as the fish product is concerned. That's it.

DM These academics, were there social scientists in there or these were more scientists? Who were the academics?

UO In the academics, you would see both the scientists and those in the social science. Because my research is combining, is interdisciplinary, it's both. We consulted both in the social sciences and also in the tri-science area talking about the prototype and to get their ideas.

DM Were there any in particular in the social science who were important in your designing? Are there people who were influential in the social science in designing your method?

UO For instance, I talked to an expert in Ibibio language. I told you my language is Ibibio. How do I get about to reach out to these women that cannot speak English? Even though I am Ibibio, my family was an English speaking family as a child. We were raised as children not from my home, so English was the lingua franca, the most spoken and I have grown with that, but I can speak my language very well.

00:55:01

But I have to consult with a language specialist to obtain ideas as per how I can get across the idea of my innovation to those women that have not gone to school or that do not speak English very well. She contributed in the strategy that we adopted in the case study.

DM Can you give me an example of things that she suggested that's very interesting?

UO She suggested that I should find an eloquent interpreter, which I brought into the group. She also suggested that, as far as the historical antecedent is concerned, I should bring in a historian that can help in the search of the historical antecedent of fish and fish processing in Africa or in Nigeria or in my state. Those were tangible ideas which I really appreciated and adopted into the case study. I found eloquent interpreters.

She also advised me even as the leader of the research team, as you are addressing them, address them in both languages. Do not go all English. As you speak in English, at certain points, you repeat the same thing in the local language so they can understand. All of these skills wouldn't come from me alone. I had to consult to get some more ideas to build on my own experiences.

DM I'm a historian. Was there one historian in particular that you talked to or many?

UO Yes, I have a historian in my team. You look at my proposal, you'll see it. I have one historian in my team.

DM I forgot this. I'll have a look.

00:57:24

UO Her name is Edikan, and she has helped us a lot in gathering documentary data for historical antecedence of fish production, so we can build on the cultural and social aspects of fish processing.

DM If we look at your prototype now, can you point at places where history actually shows in it or it's not that obvious?

UO It wouldn't be that obvious, but somehow like history telling us, history reveals that gender participation in fish processing is mostly women involved in it. Our own

prototype, rather, had to focus on looking at the characteristics of women and embarking on those aspects that will enhance women's oppression of the machine. For instance, if history says it is women that participate more in this occupation, it means that mostly women will use that facility, the innovation that we are bringing. Because of that, they have to be considered.

The design had to consider the pregnant woman, a nursing mother, a mother who is still delivering or having children. We provided a playground right in the belt environment. Then for the pregnant woman, the case study revealed that the heat was a problem to them, so certain scientific tools, insulators have been inserted in specific places where heat would escape to touch the tummy of the pregnant woman. All of these are gendered design so that it could preserve both their health and the life of the baby.

01:00:03

DM Let me turn to the programme itself. Since you received the grant, even before, you had to make an application, then you develop your brand, then there were activities that brought everybody together, like you had to write your report. There were some labs. There were some meeting with Emmanuel Mutungi, your regional expert, you also had the sector expert attached to you.

Could you talk to me about the interaction of your particular project with the general programme and how it might have helped or changed the programme or supported you or not supported you?

UO It has supported me. It's been very interesting working with regional expert, Emmanuel Mutungi. In fact, we have related to the point that I call him to share some difficulties. I call him to get some contributions, I mean my regional expert, Emmanuel. Then Kerry Grace scheduled a meeting for us with our regional expert and the gender expert, is it Sylvia or something, the rest of them. I had an opportunity to interact with them and receive valid contributions to improve on the project. Emmanuel gave valid contributions about culture.

He really emphasised that the innovation should not condemn the culture. The gender aspect made some contributions towards accessibility of the project to the women or something. It was much interesting. I also expressed to them in that meeting, Emmanuel Mutungi confirmed it, that during my case study, working with the women and their response to you is with great hope for the implementation of the project. You can't talk about an innovation that is going to end in papers or end in a virtual prototype or end in a table top prototype and that's all.

01:02:50

In that meeting, I was able to express to the experts and talked about the actual implementation of the making a live size demonstration of the project beyond the papers, beyond the virtual, beyond the table craft. We are producing a table craft of this prototype so you can see, you can operate, you can touch beyond the virtual prototype. In that meeting, we were able to establish the fact that there is need for Carleton University, IDRC to grant me an opportunity to further the proposal to the actual implementation of the facility, building the facility.

Bringing the innovation for a social test. Let the women use it, let us see how

effective this innovation would be and letting us only maybe talking about it, I received the grant to build the design and it stops at that point. There is need for a live test and demonstration of this prototype. We have been able to discuss on these things with Emmanuel Mutungi, my regional expert, and they are making a lot of contributions.

DM What about your relationship with the sector experts, Vivian and Andrew, the people who were...?

UO Yes, Vivian. The day we met online, Vivian made some contributions too. Even though her baby stopped her, she was disturbed with, it's a part of the gender challenge. But she pulled it through because she came for the meeting and made some contributions towards the project, that it should be made accessible. I should plan the project in such a way that women can access and appreciate.

01:05:14

DM Did you have a chance to participate in the labs and the common meetings or were you not able to come to the lab one and lab two and all that?

UO That was towards November, December last year or something like that. I was able to participate in lab one activities. We actually went to the lab, all the drawings and then I listened to the talk. But for lab two, I was not able to attend the last series. Kerry Grace has sent me a letter towards another, whether that is lab three or something, talking about prototyping. It's very interesting. I have registered and I'm [overtalking] that programme.

DM Good. We're looking forward to see you.

UO Because it's not enough to build a prototype but it is enough to make that prototype a reality in the real sense of it. That training over developing a prototype that is realistic and could be implemented, it's very, very important to me at this point. I'll be there in that meeting, by God's grace.

DM Very nice, I'm looking forward to see you there. Another question, we asked you otherwise but I'll ask again, if you could talk to me a bit about the challenge that the pandemic caused to your project.

UO The problems we had, the pandemic is everywhere in the world and it was here even during the case study. In the case study, you have to gather the women maybe in an open hall, and you may not have enough space for all the distance. They say keep a distance and all of those, those were challenges that we had, having a big enough hall to accommodate the fish processors. But provisions were made within the budget to buy some consumables like the face mask and the pump to wash their hands with soap and the sanitizers and all of those.

01:07:55

We have a committee in Nigeria that is taking care of all of those. The problem was there, but we had to comply at least to some extent to the rules of the COVID. It did not stop us, it was not an obstacle. We pulled through the case studies and all of those exposures, I believe, protected by God. Even though we complied to some extent, I believe God saw us through, he saw us through the deals.

DM This is the last thing I want to talk about with you. It's about the future. How do you see the sequels of this particular project? You can dream as much as you can here even if maybe, like what would help? What might be possible? What could make all this sustainable? You've already told me you would like an opportunity to...

UO Sorry, my boy was just cutting across here. Sorry for that.

DM Is it okay? Oh no, don't be sorry. I told you if you need to stop for a bit, you tell me.

UO That was an interruption.

DM It's a long interview. What I was saying is, and it's the last thing I'd like to speak about, the future. Are you okay?

01:09:43

UO Yes, I am.

DM I was saying so the last bit that I would like to do and it's really the last thing is to talk about the future of your project and maybe what... Because here at Carleton, we're thinking about, do we close this altogether? Would we be able to help at least sustain these experiments? What started around your project, how might it be continued? What could we dream about together?

UO Concerning the sustainability of the project, I am looking at... The research team as far as the project is concerned, we are looking at funding, having sufficient funds at the beginning to sustain the project. We are looking at the initial start of this project when we launch out into the field. By the plan of the research team, we hope to reapply or put up a proposal for a live demonstration test of this innovation that we are building. The funds at this first stage one year or something will not carry an actual demonstration of the belt environment and the facility.

If we do not establish this innovation in the community, testing adaptability, testing reactions of the community and find out the success of the project, we have nothing to sustain. The first thing is to plan, apply for or propose for or make a programme for IDRC maybe through the Carleton University on how the project could be exhibited. A live size of what we have proposed should be at least one belt out. After that, we may now have what to think of to sustain sustainability of the project. We have nothing to sustain in the virtual prototype.

We have nothing to sustain on the table top prototype or something, the craft work that we are creating for the world to see what we are bringing. When it is a live size has been built and demonstrated in the belt environment, we have what to sustain. Then after that, we think of the sustainability. We are thinking of partnering with international organisations, sourcing for funds every way that is descent. Sourcing for fund from descent sources, international organisations and bringing in some local organisations as well.

01:13:26

Also, soliciting for the government support because we want to help the society, we want to help the women. The help does not stop at women. Men consume fish. Almost every woman uses fish in their kitchen, and for children and also for our

men. It does not stop at the women. It's a benefit to the society at large. We strongly believe already when we were doing the case study, the government was in support because the commissioner for agriculture was the one that helped the team to gather the women from all the parts of the state in their senatorial districts.

We have created an awareness already on ground that this innovation is coming to Akwa Ibom State firstly. For sustainability of this project, we will have need to solicit for our government support as much as seek for funds from maybe international organisations, the World Bank, IDRC, from universities that are ready to support us, from all relevant sources to start this project and make it visible.

Then in terms of the multiplicity of this project, we are planning, if the project is successful at a particular state level, we could go macro, a wider coverage of the innovation. Because we are generally in Africa, the problems of the women are similar. In Nigeria, the problems of the women are similar. All we will have need of will be maybe mounting up studies in the wider society to check for the little differences that exist in culture, in language, make some levels of study to be able to also plant the innovation or carry the innovation to the macro dimensions.

01:16:04

For sustainability of the project, I included here, we have what we call the Niger Delta commission. This is the commission that is interested in developing the Niger Delta area, which is also included within the area of the research operation for now. Then for sustainability still, you realise that the international organisation, IDRC or other organisations, it is not forever this project will be supported. At the initial, this support can come in very well. It can't last forever. The project coordinators must think of making this project to sustain itself.

At that point, we can think of a gradual introduction of maybe charges for... If you look at the innovation itself, you will see a money market, where immediately after the processing, there is a centre within the belt environment for the women, for the fishes to be sold out in a small money market within the belt environment. The people that are coming to get the market spaces, they could be charged minimally. There will be introduction of the entrance pricing policy minimally at the initial.

Gradually getting them to appreciate and to love the project, to see it as satisfying their economic needs and all of that. With time, you'll realise that the project will be able to sustain itself maybe with tiny charges. Remember that the sole aim of this project is to assist and help the society. It is not to exploit the society. It's not more or less like a very big company business venture, it isn't. It is an innovation that is coming in to help the society.

01:18:57

On gradual basis with the support of the government, the support of the international organisations. Then later in life for sustainability reasons, you could introduce entrance pricing policy gradually, charging for the use of the facility gradually. This has to be done very carefully so that the intention of the project will not be destroyed, because the project is to assist, is to help, it's not to exploit.

The price and the charges that will eventually emerge or will eventually be decided on has to be seriously analysed economically to know if the new thing you're

bringing is more costly than the way they were doing it before. Is it exploiting them? There has to be careful study of economic analysis in future before you exhibit the entrance pricing policy. You cannot arbitrarily just think of a price and say, all women pay this. You that is using the money market, you that is using the other aspect, pay this, arbitrarily. No, it can't happen like that.

It must be determined by certain levels of studies and expertise so the work can be sustained. In the long run, as much as the work is able to sustain itself, it can now multiply to other states of the nation. You can look at Nigeria and come out of Akwa Ibom state. We can look at Nigeria and assist other women carry on the innovation to other societies and it is on and on and on, well-sustained.

01:21:01

DM If I go back a bit, that programme has 20 projects, eight of them in Africa. Did you have a chance beyond talking to Dr Mutungi to get to understand what was happening in other projects and maybe get from other projects some ideas? Or did you really keep to your own during this adventure with GDS?

UO During the labs and during the presentations, all the eight projects, no, not eight, it's like a few were not present. I attended lab one in the case study and also I attended in the prototype. During that prototype session, I had an opportunity to learn of what other groups were doing and the way they were planning their prototyping. I was also sharing with the groups in the case study. Kerry Grace told me attend both.

I attended the case study groups and also attended the prototype groups, so I could learn from what others are doing in their projects. We can always learn from each other. I think I've had that. During the lab series too [overtalking].

DM I hope you can also share your news and learn from the others in that other lab that is coming. At the more general level, Dr Okon, you spoke very interestingly about the sustainability of your own project. If you think about the whole programme where IDRC invited Carleton to try to find ways to explore gender design in STEAM. If you were to do another programme like this from what you've learnt over the last two years, what would you suggest we do to promote and explore that idea of gender design?

Do you see ways by which IDRC could do more of this or learn from projects like yours? What should they do now? Because it was new for them to explore this idea and to try to promote it and to see how far people would go with it.

01:23:46

UO Really, it was also new for them to bring up the issue of gender design and exploring it for the GDS team in Carleton. Then it's been great for them, it's very impressive, very useful, very impactful to people's lives. What I would suggest is the very last thing you are talking about, the sustainability of the GDS project.

DM So, to take, say, the same project and to try...?

UO Yes, for the GDS Carleton in collaboration with the other funding bodies to seek, to strategise on sustaining the GDS programme, it could be beyond the Carleton University scope. It could look at the macro on a wider perspective of the GDS

programme, particularly in LMIC, in low-and-medium-income countries. It's a very useful programme. As they keep coming on to some African and other countries, it's a big contribution to the development of this side of the world.

My advice would be on stepping up their strategies to sustain the GDS programme. They can go deeper within the system. They can go wider in scope. They can also go deeper within the system, like furthering the projects that are already on run. For instance, not just my project, in any other project, furthering to the next step and the next step and the next step so that it will not look like something like some politicians do.

01:26:05

When they start a project, some other one comes in, instead of continuity of that project from where the other one stops, you realise that someone may choose to start a new project altogether while the other one is incomplete. My advice to GDS is continuity. There should be strategies for sustainability, strategies for continuity of some relevant projects within the system.

For instance, like at this point we are sponsored to produce the gender design on a table craft, and maybe virtually there should be continuity to the live development of innovation so it can actually benefit the society. Since this is one of the aim and objective of both GDS and IDRC is to check how to assist and benefit the low-and-middle-income countries. Producing a table craft prototype, it's good, it's a step one to it.

The next step to it would be to continue that project. I'm expecting to bring up a proposal that will work towards the continuity of the project, and not just stop at this point of fulfilling the virtual and the craft prototype, so that people, women, indeed have this need. This need will be satisfied by the presentation of the innovation for them. Those are my major key advice or recommendation to the GDS team.

DM Do I understand that you're actually preparing a proposal? Or you're not writing something to suggest ways to sustain your project, but you would like to be able to write one, is that what you're saying?

UO Yes, of course.

DM I'm going to run the things that we wanted to talk about. I don't know if there is anything you would like to say. To me, it's actually way more than I dreamt of learning from you. I'm very grateful for your time here. I know you're very busy. Is there anything else?

01:28:54

UO Yes, so that's another constraint, I'm very busy. A lot of programmes I would have loved to participate. I would plan participating, register for it, when it reaches that time, some other thing cuts in and I'm not able to make it. It does not give me any pleasure.

DM I'm very glad you had the time this morning. I hope your generator carries on going. I will say goodbye and stop the recording.

UO Thank you.

DM Thank you so much for taking the time.

UO Thank you very much. I'm grateful.

DM See you at the prototype workshop. Take care. Bye-bye.

UO Thank you. Bye

01:29:31



GENDERED
DESIGN IN
STEAM

ID41 - Re/designing the University of Buenos Aires campus to be gender inclusive in Argentina

Interview transcript

Interviewee:

Carolina Spataro | Principal Investigator

Universidad de Buenos Aires (UBA)

Interviewer:

Ona Bantjes-Rafols | GDS Research Assistant Coordinator

Carleton University

Date of interview:

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Vanan Online Services, Inc.

ID41 - Re/designing the University of Buenos Aires campus to be gender inclusive in Argentina

Interviewer: **One Bantjes-Rafols**

Respondent: **Carolina Spataro**

Interviewer: [00:00:00] **Okay, thank you. I want to begin with a broad question, could you explain the story of your project? You can speak as much as you want.**

Respondent: Alright. Well, this project, which has the purpose of thinking about gendered spaces within universities and the use of its spaces regarding gender, has a background that has to do with the impact of... I'll try to be concise because it's a long story. It's not that long, it's an intense story over the last years in Argentina, the impact of the feminist agenda at a general level in different social areas and, particularly, in universities. In Argentina, "Ni una menos". On June 3rd, 2015, there was a massive attendance in the streets due to the femicide of a young woman. This massive attendance was set up on social media. This attendance was massive in different squares of the country and, crucially, in Congressional Plaza in the city of Buenos Aires where we marched... It wasn't a march, it was a gathering. Its slogan was "Ni una menos (Not one woman less)", "Dejen de matarnos (Stop killing us)". The slogan, mostly, emphasized gender violence in 2015, specifically, violence against woman at its more harsh version, femicides. This is not a coincidence and it's not that feminism began in Argentina on June 3rd, 2015, because there's a long background of political organization. In Argentina, since 1986, there have been national meetings of women in an sustained manner that have been, somehow, organizing all the different demands and different groups that gather around the feminist agenda and feminisms in plural. What happened on June 3rd, it's not that feminism began there, as we always say, was that feminism was magnified as never before in the history of our country and of the region as well. Feminist issues, or some dimensions of the feminist agendas, appeared in the mainstream press, famous artists, show business, sports, labor unions, work places, high schools, family tables, coffee shops. It was thematized as never before and it had an impact on universities. Since 2014, for instance, International University of Comahue, which is a university at the south of the country, had its first protocol against gender violence. What started to happen, even before "Ni una menos", was that some feminists from universities started to consider that it was important to build a tool in order to intervene or prevent gender violence situations at universities. Why? Because universities are not exempted from violence, discrimination, or abuse as regards to gender or sexual orientation. But, until that moment, universities used to associate themselves to this agenda on academic terms of knowledge production, but not so much on intervention. From 2015, protocols began to be dramatically approved in every university of the country. Nowadays, I think 80 percent of

the universities in Argentina have protocols to intervene and prevent gender violence or sexual orientation violence situations. In this context, or with this entry point to violence, other agendas linked to feminism in universities started to appear. Agendas linked, for instance, to content, knowledge, gender mainstreaming within curriculum content of subjects, as a demand, above all, by students. Also, the multiplication of training spaces, department of sexual health spaces, that is to say, places where sexual rights can be promoted. If you don't understand something or if I go too fast, just let me know. And, within those heterogeneous work lines, there's one that is very important and has to do with [00:04:57] the redesign of spaces considering feminism or a feminist gender perspective. On the one hand, there are nursery schools for the children of the people who work or study at the university. This has a long background. The nursery schools that exist, at least in the University of Buenos Aires, which is where this project takes place, have many years. But, well, this space was redesigned considering this. Also, breastfeeding facilities, which are the places where women can breastfeed or refrigerate breastmilk and take it once they leave the university. That actually is a redesign that happened in the last few years thanks to "Ni una menos", especially. And, also, a great work line that is being introduced at a different pace, but which is being introduced in the University of Buenos Aires, has to do with gender-neutral bathrooms. That's to say, making the university a place that welcomes transsexual and non-binary people who don't feel comfortable going to bathrooms for women or bathrooms for men. That's regarding the redesign of what exists. Also, there's a question about the use of spaces considering gender. For instance, what spaces are they afraid of? What people? Also, what spaces are designated for free time, enjoyment, and resting? Which are the most valued spaces in universities? To sum up, this project takes places in a historical context where the feminist agenda magnified in Argentina as never before. It was introduced in universities, first, thanks to the approval of university protocols and, based on those protocols, with the development of other related issues, especially, to democratization, inclusion, and stay of the people who are in the university. And, to give you an idea, the University of Buenos Aires is the biggest one in our country and has 13 departments, and on each of them... departments or academic units. In each of them, the progress of this agenda is different, because it meets preexistent traditions of those departments. The things that happen at the Law Department, at the Design Department, at the Social Sciences Department, or at the Department of Medicine, etc., are not the same. Was I clear?

Interviewer: Yes, totally. You can speak as much as you want, don't you worry about that. Perfect. So June 3rd, 2015 was very important to the context of this project, if I understand correctly, but how did your experiences influence the approach or the methodology of the project maybe?

Respondent: Alright. The most interesting and most important thing to talk about, at least from this project in particular, is the interdisciplinary dimension. Because, in this project,

we come from social sciences, that's to say, asking questions with colleagues with whom we have been working for more than 15 years in issues related to gender and sexuality using qualitative and quantitative works, surveys, interviews, etc., in order to think about the meaning that is given to everyday experiences, in this case, the use of space and design. And, on the other hand, there's a group of colleagues that come specifically from the College of Design and Urbanism; that's to say, they are formed in issues related to design. So, this is the interdisciplinary mixture where we have thought the methodology and also, the ones who come from social sciences have learned that gender relationships don't [00:09:35] happen in space but... sorry, they do not appear just because, but they are introduced in a specific space, a space that is designed and, somehow, informs our experiences, the meanings that we give to our daily routine. That was learning for the ones who come from social sciences in these years of interdiscipline. And, on the other hand, for the ones who come from design, and thinking about space issues, the learning had to do with analyzing the meanings, the uses, and significations that are given to those spaces which are designed, worked, and intervened in design. So, interdiscipline, in methodological terms, is the strongest thing in our investigation. I say "our investigation" because I'm not alone in this, Griselda Flesler and I co-direct this project. She works and is a lecturer of a gender subject and a design subject in FADU, College of Design and Urbanism in UBA, and with Rafael Blanco, my colleague in College of Social Sciences, who works in the connection of university and gender in his doctoral thesis since 2007.

Interviewer: Have you noticed the way of understanding interdisciplinarity has changed before and after this project?

Respondent: Yes, definitely. I'm going to speak about my personal experience now. I've been working about genre perspective for many years, specifically, I became interested in working with women, middle-aged women and in the crossing of different issues, but I never thought of the dimension space of social media. During my training, I always preferred gender dimension, class dimension, and even age dimension, but I never thought of social media in a designed space. I thought of time-space, that's to say, geographically, historically, etc., but not in a space that designs, forms, conditions, and enables, also, those experiences. So, yes, in my opinion, this project was a turning point for me, no doubt.

Interviewer: Who is this project aimed at?

Respondent: Alright. This project, on one side, has the purpose of producing knowledge about the uses of the space in Ciudad Universitaria, which is a space specifically designed for the University of Buenos Aires, where two departments out of the 13 from the University of Buenos Aires are located. We find the College of Design and Urbanism and the College of Exact and Natural Sciences. Due to its characteristics, Ciudad Universitaria was conceived and designed to house all 13 departments of our university, but, due to historical issues of our country, coups d'état, etc., this project failed. However, those two

departments stayed there. It's located on the banks of the river, it has characteristics that make it very unique, and it's the only university town in the city of Buenos Aires. On one side, producing knowledge about that particular location with its own story, and, on the other side, also, we have proposed to make recommendations to those who carry out the university management of those two departments, and, also, of every national university of the country. Because, in Argentina, there's a gender university network that brings together every university of the country. It's a network that was created recently, in 2018, and produces learning in a collective manner, because this agenda is recent, as I said before. It's [00:14:12] recent considering the possibility to manage, intervene spaces, create protocols, and think of curricular dimensions. Therefore, this project has a dual purpose. On one side, producing knowledge about a very relevant, important, and historical phenomenon at universities and, specifically, regarding space-gender mixture, and, on the other side, providing this knowledge also, to make detailed recommendations about ways to intervene the space of universities as regards to gender.

Interviewer: **Thank you. How did you maintain the gender approach during the process of this project?**

Respondent: What do you mean by "maintain"? I didn't understand the question.

Interviewer: **The initial idea is gender as the main structure of this project, but, in everyday life, the method to keep this project present.**

Respondent: I think it would have been impossible not keeping it present, because the ones that work here have our professional insertion in this agenda. I'm a gender policies assistant secretary of one of the 13 departments, in social sciences. So, I get to think about this every day. Griselda Flesler is a lecturer of a gender subject and a design subject. So, our background and our daily work consist of thinking about this. We have kept it present, also, because it's an ongoing debate matter in our country. There are discussions in the media, discussions at work. The demand for rights is not something that we could sit down and say, "Well, how do we introduce this topic to our work?" It's part of our central work. I don't know if I could answer your question, but this is present in our everyday life.

Interviewer: **Yes, I think I understand. It's always present.**

Respondent: Right. It's not that we work with other topics and we got the idea of thinking about gender issues. For the people who carry out the coordination of this project is our modular training. Therefore, it has been easy for us, because I think doing it differently would have been very difficult.

Interviewer: **Has the way of doing this project influenced in designing the investigation activities?**

Respondent: Yes, of course.

Interviewer: Perhaps you could talk more also about it, the design of activities within this reject taking into account that gender is a priority in this as well.

Respondent: Well, when we designed the work methodology, on one side, we carried out a survey that was designed for people who study or work in Ciudad Universitaria. On the one side, we asked about the affection that spaces in general generate, not only intervened spaces with gender perspective, but libraries, workshops, labs, bathrooms, corridors, dining [00:17:57] rooms, outdoor spaces, and the ecological reserve too. Well, anyway, affections that range from negativity and hate to the completely opposite, love, and, in the middle, different affections or feelings which tried to cover it in a broad manner and having, also, the dimension of the neutral or what we don't know about. Then, also, we asked the same question but about gendered spaces this time, such as gender-neutral bathrooms, offices where protocols are handled, breastfeeding facilities, nursery schools. Also, we gave them a place in which they could comment and make proposals of space interventions, and another place to comment on which spaces generate insecurity or fear. The entire interpretation of this result was made according to the people who answered this. That's to say, their gender identity, their sexual orientation, their age, their role, because there were students, lecturers, administration staff, and civil servants. So, while analyzing this, we always took into account the persons that answered it. Was it a 20 year-old transsexual student, or was it a 50 year-old cissexual lecturer? That has been the key when interpreting our work, analyzing each answer in a quantitative dimension, as well as the qualitative analysis that we made about the outdoor spaces in which they were able to make comments.

Interviewer: So, you included class or race issues in intersections as well.

Respondent: Not so much, we haven't included dimensions connected to race in the survey, because the questions were about "role", "age", "gender", "self-perception", "sexual orientation", and "year you joined the university".

Interviewer: Was this a decision considering the approach of the project?

Respondent: Exactly, yes, because there were many questions, so, we wanted to prioritize the gender-space mixture taking into account generational dimension, because people who joined after 2015 have a certain idea regarding this issue, whether they are interested in it or not. As I said before, feminist demands, in general, appeared in the social agenda. For instance, singers, soap operas, literature. Even if you are not interested in this topic, one way or another, you heard about it, and that was, also, our hypothesis and our starting point. So, we were more interested in the gender matter and in the age-generational matter than in other dimensions that we could have investigated too, of course.

Interviewer: Can you talk about the pandemic and if it has introduced obstacles to the project and how you overcame them?

Respondent: Yes, well, it's great that you asked me this because I forgot to mention it. The pandemic made us modify our methodological strategy, because we had planned, at first, making face-to-face interviews and focus group with people with whom we could visit the building using a methodology that is called "Grand Tour". But, well, that wasn't possible, because fieldwork started during the pandemic and isolation process. Even nowadays, in Argentina, buildings and universities continue with online classes. Therefore, visiting the building with a group of workers, lecturers, or students wasn't possible. So, this meant a [00:22:34] new balance of our questions and the elaboration of a methodological strategy that would take this context into account. For that reason, we made this survey, also, with methodological advice. We worked a lot there. And, on one side, we made a survey and a virtual netnography in order to explore the main milestones, since 2015 until now, regarding the gender agenda in the official and unofficial social media of these departments. And, of course, we added the methodological-quantitative advice for the realization of this survey. That's to say, we learned a lot, we had to rethink the project depending on the pandemic, but, well, we were able to pull it off.

Interviewer: **Was there a person, or something in particular, that helped you in this strategy change to netnography?**

Respondent: Yes, I can't remember the name right now, but we took a course with... and I feel bad about it, but, well, it's in our project. We were trained by a netnography specialist in order to think of a way to see reactions on social media, which is not simple. In order to know how to initiate conversations and be able to evaluate what we were analyzing, we were trained in netnography. And, regarding quantitative methodology, we were guided by Sebastian Sustas, who is a Social Sciences methodologist, with whom we were able to think of the survey and, also, to think of feasibility in the analysis. As I said before, we could have included many more variables, but that made the realization of reports harder as well as the realization of recommendations. What we wanted in the time that we had, which wasn't much, was being able to offer a solid knowledge, with a good basis, and, there, being able to introduce knowledge about what is happening and, also, make concrete recommendations to those who carry out university management.

Interviewer: **Now, I want to ask you about your participation in the program of GDS "Gendered Design in STEAM". How did the program of GDS "Gendered Design in STEAM" help, or not, your project?**

Respondent: I didn't understand the question.

Interviewer: **I wanted to know, how did the Carlton program help, or not, your project? Regarding things, like, the different activities that we have.**

Respondent: Alright. Yes, you are talking about the meetings with other teams, right?

Interviewer: **For instance, yes.**

Respondent: Well, that has been very important as well because it has allowed us to see a project that is performed by different teams, methodologies, questions, countries, cities, and cultures. It has been very useful for us, also, to see what we could do in that time, because the pandemic meant a redefinition, as far as we could see, of many teams. Therefore, the most important things were the meetings with teams that were carrying out investigations within this macro project, in order to exchange and see levels of process as well. In that [00:26:52] respect, considering the team I coordinate, we are all very happy. Maybe we were not able to do everything we wanted, but we were able to do more things than what we wanted because the context changed. We have learned a lot and, also, we have learned during the meeting with colleagues from other countries. So, I think that meeting was very fruitful. I also think it's really important to learn with others. Although this agenda has been in Argentina for a long time in an academy that has always been interested in gender dimension in its crossing with space, but I think this agenda is fresh and promising, at least for our country.

Interviewer: **Was the fact of having projects grouped by region positive?**

Respondent: Yes, I think it's really interesting because they share, somehow, the climate of those times and the discussion of some problems. Yes, I think grouping them by region is great.

Interviewer: **You were able to connect with other projects from Latin America then.**

Respondent: Yes, especially with colleagues from Brazil.

Interviewer: **How was your interaction with regional expert, Raquel?**

Respondent: In fact, the one who interacted more with Raquel was Griselda, my partner, who, somehow, also coordinates this project because, as I told you, I come from the social sciences area and I came to the space and design issue recently. But, well, that has been Griselda's topic for many years, therefore, she interacted more with Raquel. For that reason, I had suggested that both of us were in this interview. In any case, I know Griselda will be interviewed separately, so she can answer this question better.

Interviewer: **Perfect. So, you have spoken about connecting with other projects, you were able to connect with other projects from Latin America, but I wanted to know if you were able to connect, also, with other projects from your area that are not necessarily from the region.**

Respondent: Griselda was also more involved in that task during the meetings. She has participated more in the meetings and arguments. What we have done in Argentina, also, was taking our investigation to different congresses so as to spread the preliminary results

and receive comments, feedback, critics. That has been really important and it still is very important because it's a moment in which we are beginning the final paper of the report that we have at the end of the year. Therefore, we have received feedback and that's very helpful. And, Griselda has participated more in the reunions with the rest of the teams, so she will be able to speak more regarding this issue.

Interviewer: **Perfect. So, since you brought up this issue, the future...**

Respondent: [00:30:30] I'm here.

Interviewer: **No problem. Which is the next stage for this project?**

Respondent: Well, in this project in particular, all of us are finishing analyzing the quantitative and qualitative data of the survey. Meanwhile, we have already delivered a preliminary report. But we are adding so much information that we are now adding some dimensions that we couldn't include before. Also, we deal with the work dimensions of the netnography. In addition to this, we have done a paper with sources and historical documentation of the story of these buildings, their designs, and the way in which they were conceived regarding an historical and very particular time of design in Argentina. And, we are writing the project considering those three dimensions, adding an entire section for recommendations, also, making the design of the presentation, and thinking and putting together future publications as well. We have already presented one of the advances and we hope they are published in the near future. Well, something really important in these investigations is being able to spread them and that the information that we have systematized, interpreted, and analyzed is made known. Especially, for those people that have a particular interest in the world of design, in the world on gender and feminism, and in the world of universities. This work has a great future regarding expansion and consolidation with others. So, in principle, this is our near future. We are working on the final preparation of the report in order to present it at the end of the year.

Interviewer: **Do you have any dreams about what this project, or investigation, might become?**

Respondent: I'm sorry, I didn't hear you.

Interviewer: **I asked you if you have any dreams.**

Respondent: Yes. We are very happy to know that the ones who are interested in intervening in gender-perspective spaces of universities can read this project and read the report that we are going to carry out. Because, also, we have alerted the resistances or objections that exist regarding the feminist agenda, and it's important to hear this. On one side, there are objections that might come, or not, from a conservative position, people who don't want anything to change. But, also, sometimes objections come from lack of knowledge about the necessities of the specific population that works and studies at the

university. We noticed something that, actually, is an obvious fact, but when asked about gender policies, they answered inconveniences or critics about basic structural issues of the university, such as cleanliness, maintenance, toilet paper in bathrooms. Therefore, it's important, when intervening with gender policy, to take into account other dimensions that are not dealt with there. Maybe, neutral-gender bathrooms, on one side, are an intervention that has been well received, but the critics that they had didn't have to do with the intervention itself, but because they said, "They do this, but they don't solve structural [00:34:25] issues of bathrooms in general." So, our dream, if you ask me that, is to take into account that a gender policy requires a comprehensive intervention regarding the conditions of work, study, and stay in the university. Intervening neutral-gender bathrooms is not enough, but it's necessary to think of the policy concerning bathrooms in general. So, that's our dream, being able to reach the people who make decisions at universities and, also, that other institutions take it. Companies and government spaces also have space layouts where they can find some keys for interpretation and some ideas to intervene in design.

Interviewer: **What could help you to reach that future?**

Respondent: That's a good question. On one side, I think our job is to produce academic papers. That's something nice, something that we do, and that we are already thinking and doing. This will allow us to reach a specific audience. On the other side, I think we should create communication pieces that are aimed to a wider audience, from op-ed pieces in newspapers to some audiovisual material that we can make about this project, and have wider dialogues regarding the three dimensions, the feminist agenda, the design agenda, and the university agenda. Because, otherwise, at some point, we end up talking among ourselves, and I think it would be great that a project of this magnitude, which meant a lot of work and effort for us, could reach a wider audience. I think having a wise communication strategy would help us.

Interviewer: **Perfect. Last question, what is important in order to maintain a long-term project?**

Respondent: That's also a good question. I'll try to be concise. In my opinion, there are two things. On one side, in terms of the ones who convene this project, that's to say, on your side, having financial resources on time is great. It happened and it worked perfectly, at least for our team, I can't speak for everyone, but it worked perfectly for our team. Having a clear dialogue about which people are going to answer those questions, and how to solve doubts, worked very well too. I've been taking part in investigation projects for many years and, to be honest, I'm very happy and pleased with the dialogue that we were able to have with you. I think that's a really important aspect from the ones who convene this, that there are clear rules and that the time limits for funding executions are clear, as well as the delivery time limits for products. We were able to present what we were asked on each date

because that was established in advance. So, in that sense, I think that job is well achieved. From our side, that's to say, the teams, I think it's really important that someone leads and coordinates this work; Griselda did that very well, someone who, also, is in charge of finance, because we must learn to perform, allocate resources, and to develop a good budget. Also, we are very happy with that, because we were able to think beforehand what we wanted to do and what we needed the money for. I think that worked well. We have used part of the budget, also, for the design of the report. And, in terms of the questions you [00:38:35] asked me before, "how are you going to reach, communicate, and spread this?", well, it was really important. And, also, it has to do with the fact that there are design leaderships in this project, Griselda and her team. Otherwise, the ones from social sciences, generally, end up saying, "Well, how are we going to design it?" Well, ultimately, I think having had that was, as we say in Argentina, a great goal, a big hit. On the other side, also, I think the question is how to make it work in the long-term. Also, it's the ability of rethinking it considering the context. Because due to the pandemic, having changed the work scenario so much, we could have said, "Ok, it's not possible." I think that something that we were able to do, on the side of social sciences now, was to suggest a viable methodological strategy to the work team during the context of COVID. That was quite important, because it made it possible and doable. In addition to this, team commitment. This team participated in all the reunions. Along with Griselda, we were able to establish a calendar of meetings with frequency so that anyone would disconnect themselves completely from the project, where we would present the results of every element and every component of the investigation. So, systematic and ongoing meetings, reading, and external advice made it possible as well. Also, knowing that there are things that we don't know how to do and that we need training, as in the case of netnography, which wasn't planned beforehand, and in the case of the survey, despite the fact we have worked a lot there, it's always important to have methodological advice. We must know what we can do, what we need to be trained for, consult or have a connection to other places. So, I think our project meant a lot of work in a brief period of time and at a moment in which the world changed. What I've been saying, although I'm probably forgetting some things, made this project possible.

Interviewer: Thank you. Those are the questions that I have for now, but I want to know if there's something I didn't ask you about, something that didn't come up yet or something that you want to talk or make comments about.

Respondent: No, I think your questions went from macro to micro, that's to say, the general context of the production of ideas regarding this project, because before writing a project, you must think about it. The team that carried out this project was already thinking of this combination and this project was a great opportunity to make, using these questions, a systematic investigation project with plenty of material that, as we say in Argentina, will give us many talking points. It will give us plenty of material to keep writing, thinking and,

in any case, present ourselves, eventually, in a call with something that is advanced and with a second part to continue exploring. So, it's fine. I appreciate your questions, they were very clear and, at least for my part, that would be all.

Interviewer: **Thank you very much. Well, I'll stop the recording now if that's ok with you.**

Respondent: Perfect.



GENDERED
DESIGN IN
STEAM

ID41 - Re/designing the University of Buenos Aires campus to be gender inclusive in Argentina

Interview transcript

Interviewee:

Griselda Flesler | Co-Principal Investigator

Universidad de Buenos Aires (UBA)

Interviewer:

Ona Bantjes-Rafols | GDS Research Assistant Coordinator

Carleton University

Date of interview:

26 October 2021

Transcribed by:

Vanan Online Services, Inc.

ID41 - Re/designing the University of Buenos Aires campus to be gender inclusive in Argentina

Interviewer: **Ona Bantjes-Rafols**

Respondent: **Griselda Flesler**

Interviewer: [00:00:00] **Perfect. So I'm going to start with a very broad question and that is if you could explain the history of your project to me, and you can spend as much time as you want.**

Respondent: Well, my interest for almost 20 years has to do with crossing gender studies with design. From that moment on I have worked as a teacher at the University of Buenos Aires of the Faculty of Architecture, Design and Urbanism, but I always participated in teams that had researchers from the social sciences and that helped me to develop an interdisciplinary work and to be trained by specialists in social sciences and gender studies. Meanwhile, my undergraduate training was in graphic design. So I needed training where I could also acquire knowledge of gender studies. And I was always interested in building a space within my faculty that had to do with this intersection. I was able to generate that first with a class, then with a course, and finally it ended in 2017 being... In 2013 it was a postgraduate course on design and gender studies, and then in 2017 we were able to open the chair of design and gender studies for all the careers of the Faculty of Architecture, Design and Urbanism, which are seven careers, and for also the degree, that what it allowed was a massiveness that the postgraduate instance at the University of Buenos Aires does not have. When we speak of massiveness, we speak of 400 students per year in undergraduate matters, and that was something very interesting. Within that process, during that process, I finished my master's degree and I was interested in... and I started my doctorate in social sciences and joined projects where we formally began to work on these issues. I worked there and have been working together with Carolina Spataro, who is the director of the project. And when we had the information about the possibility of submitting a project here in Carlton, we were already inserted in a project financed by the University of Buenos Aires, which analyzed the issues that have to do with gender studies, not only referred to the question of the design of the spaces, but also to other aspects. And I was interested in focusing and delving into the issue of the design of spaces in the university space of the University of Buenos Aires, in the context of the feminist agenda that broke into the national universities of Argentina, especially from the year 2015. Although there was an academic tradition of feminist studies decades ago in some faculties throughout Argentina, the cross between militancy, political activism, and an interest of the institutional efforts to incorporate some of the feminist demands, appears strongly as of 2015. So I was interested in delving into this and then in the context of submitting to this opening that was made for different teams in Latin America, it seemed an opportunity to also summon some teachers from the team of the gender studies design

chair who did not belong to the original project financed by the University of Buenos Aires, and we also found it interesting to add gender referents in exact science faculties that here have a development of everything that has to do with technology, with STEAM and everything that the program started to... proposed as a framework to think about this project. So what we did was give it depth and focus, zoom and approach the university space and how it had impacted in concrete terms regarding whether there had been material and physical modifications in the space, but also in terms of sociability and living of the spaces, and if the perception regarding the spaces had been moved by [00:06:33] this feminist or gender agenda. So to analyze that, we set out to organize the work precisely to understand that on the one hand, it was necessary to carry out a material and physical survey of the modifications in the building, in the campus buildings, but on the other, it was necessary to have a record of sociability, of the perceptions of the people who used these spaces, both from those who are researchers and academics, teachers, as well as of the non-teaching staff and of course, also of the students. So, the approach methodologies for those different objectives also had to be different. And on the other hand, something that we were very interested in was incorporating students into the project. In order to incorporate students into the project, we had to think about the way, because also here, for some issues that have to do with the logic of the University of Buenos Aires, which is a free, public university, etc., it is not allowed, for example, to pay to students; that is, to use funds for the students, but the foundations with which we work to manage the funds do not... this type of mechanism is not usual. So it seemed interesting to us that participation had to, of course, bring a benefit to the students that had to do with being able to develop some academic credits. In that sense, what we were able to implement was the work within the chair of design and gender studies, where they could have access to the theoretical framework with which we work in the research. And they, who are the students, who are the privileged subjects of this research, in the sense that they are the ones who use this space on a daily basis, could project designs, intervention design projects and modification of the space from this theoretical framework of expansion of rights and gender perspective. So it was implemented during this year. The subject has two semesters. The subject lasts a semester, but it is given twice a year. So in the first semester, we already had 200 students with many projects of intervention in space and reflection on space, and that was the participation. So we had these three axes: on the one hand, we had to make a spatial register; on the other, we had to think about how we acquired knowledge regarding perceptions and sociability in space, and on the other, the concrete incorporation of students to the project. For the second on, for what had to do with informing ourselves about perceptions and sociability in space, we proposed two possible methodologies. One had to do with a massive survey that was carried out with an online system, Survey Monkey, to survey about the sensations and perceptions of specific spaces that we delimited in order to see what was happening. And we designed a list of sensations from a theoretical framework of what has to do with the affective turn. And from there, we had responses that were driven by those specific sensations. But at the same time, there were also open questions regarding what you would modify on the space, if there were spaces that generated insecurity or fear. And what you

thought of the survey and what you would change. Some questions that were open, that also gave us a lot of very interesting information and some unexpected or that we did not foresee that we were going to have with the massiveness with which we obtained some answers. Some first findings that we had served us a lot for the continuity of the investigation and to also guide towards where we wanted to end this investigation, which as a final objective, of course, has to generate a report of recommendations to the institutional managements, both of the University of Buenos Aires and any other national university, regarding how to manage this agenda and the spaces in which the [00:12:56] institutions are inserted. And when it comes to methodologies, on the one hand we did this survey, and on the other, we planned to make tours of the university space with students, using a technique called Grand Journey, which has to do with the person you survey are recounting, doing like a great tour, like a tour, relating with a language that is their own language, who speaks and gives us a lot of information about the perception and knowledge that person has of that space, and they are building a sense of the space, which is very important to us. All this methodology that we planned to implement was impeded by the pandemic. So quickly what we did was understand that we had to apply another methodology that, while sustaining the perspective and approach of ethnography, had to be focused on digital ethnography. But honestly, we weren't trained in digital ethnography. Yes, part of the team has a very strong training in ethnography. They are social scientists who have developed their doctoral theses based on these methodologies but not on digital ethnography and its specificity. For this, we then use part of the resources that the program gave us to train ourselves with specialists in this methodology. And then, from that training, we developed a methodology to apply in the project and it is the methodology that we applied during these last months to make an analysis regarding what the university community was perceiving regarding the gender agenda on the one hand, and the relationship with spaces, what was happening there. Well, it was very interesting, especially because we had to really learn a new methodology because it also allowed us to see the richness that this methodology had, which we had to use by force due to the conditions of the pandemic. I have to clarify that even today the university cannot be used by students. Only now are they opening up for some very specific activities, but it would have been impossible to do so since due to the time of the project, we are already writing the final report today. Then it would have been very complicated. Not only was it good because it gave us a lot... it allowed us to access a lot of information despite the problem of the pandemic, but because it provided methodological tools that, the truth is, can be applied beyond a pandemic and that can be complementary to a traditional ethnography. There is really one... especially if one wants to study the student community, there is a life and a sociability that is played out in the networks that does not occur elsewhere, and that you can hardly find... some data, some information, some findings that we have achieved, I don't think we could have had them with a traditional ethnography. Well, of course for the future we want to be able to do and apply this Grand Tour methodology because it seems to us that it reaches a specificity and depth that other methodologies do not have. But well, in order to massively develop some findings that allow us to make

recommendations, we believe that we were able to overcome the inconvenience of not being able to access the space.

Interviewer: Thank you. Perfect. So can you maybe talk a little bit more about how you came up with the idea for the project, in the sense that you were talking about focusing on space specifically? I don't know if you have anything else to add to this idea of why space and not perhaps another type of design.

Respondent: [00:18:51] I consider space as a totality that encompasses a lot of factors, which not only have to do with what one could understand as architectural space on an architectural plane, but also has to do with the idea of inhabited space, space used, and that always brings a lot of statements and actions and feelings regarding the space that give us is different layers where one can analyze. So it is not that, when one analyzes space, what one analyzes is only the material architectural space, but necessarily what is also analyzed is what happens to the uses of that space; and as Sarah Ahmed would say, the uses must always be thought of in terms of possible uses, enabled uses, and deviant uses, what she calls queer use. That is, to think that there are deviations from the norms of what is expected from the use of certain spaces in the institutions, who determines those norms, how it is stressed... all the time there is a tension between the norm and the deviation. And it is not fixed. So you cannot start by prefiguring what the norm is and what the deviation is, but you have to go and see how the sense of space is built. And then space is material space, it is also... for example, it is a wall but it is what is written on that wall. But it is also the action of the institution that cleans that wall. And then it is afterwards the option of answering to the cleaning of that wall. It is the space understood in the complexity of its uses within an institution where policies that are institutional, academic and sociability policies are played. There are countless effects that the analysis of that space brings. So my interest is to realize that many times, the analysis of the feminist agenda in universities was much focused on institutional policies that had to do with regulating violence, through protocols, the implementation of protocols or regulations that could intervene in the event of gender violence. There was also a focus on what had to do with the curriculum, the content of the... Here they say subjects, of the... I don't know how they are called, but of the courses, of the programs of each academic discipline. Then rethink and discuss the contents from a feminist perspective that could be thought from other perspectives. And there is also a lot of focus, but no... and then there was a focus on intervention in the campuses regarding materiality and certain demands such as, for example, a bathroom, a non-gender bathroom. But from a look... perhaps it is very materially, from a specific intervention. And what interested me was to think not only about spaces that already had that title of... they are spaces that we call gendered because they are within the agenda of what to do, but also to think about how the feminist agenda influenced the perception of spaces, of any space within the university space, in how we could observe or analyze what was happening with the modes of territorialization and appropriation of space from a climate that had changed and that had to do with the fact that it not only appeared a feminist agenda but also an agenda of resistance to that feminist agenda.

And that climate had to also cause effects on the appropriation, on the perception of the space in which one attends on a daily basis to work or to study. And that is what I was interested in analyzing. So it is a bit from that notion of a space in not fixed terms but of something that is continually re-signified, and that I was interested in positioning myself above all to think that there is an existing materiality from now on. I am not saying that there is no materiality to which we must pay attention, but it is also to understand that the identity of the subjects is built in the use of those spaces and that also the perception and meaning of those spaces is built in the use, in how those subjects use the space. So [00:25:31] it is from this perspective that that is why we also introduced the theoretical framework of the affective turn in order to be able to think about how certain sensations regarding the use of spaces are socially constructed.

Interviewer: I also want to ask if... you have talked a lot about the perspective of different disciplines, that in this project there are social shades and also design and their different perspectives, but I wanted to know if you understood the relationship between these disciplines differently before this project. If there has been a change in your perspective.

Respondent: Well, personally, I worked... I did my whole academic career in interdisciplinary teams because my teaching practice was in teams that had social scientists in theoretical subjects that were within the degree in design. But beyond the question... but there were experiences in which, that there were social scientists and that there were designers, did not necessarily mean that we could work as a team or that we could enhance the contributions of each one. Many times from the design I felt like an observer of this discourse of social scientists. I felt underrated out there. I felt that I was coming to illustrate and bring, and materialize ideas. So not necessarily all experiences have been positive in that sense, but I have also had something else. I have been able to have exchanges that have been very fruitful for the formation of projects where there really was an effective interdisciplinary capacity. In the case of this project, the challenge was that we came to unite different disciplines but also to talk about something that is our work context. We are not talking about an object... we are not choosing an object of study that is alien to us. In short, we came to talk about our space and ourselves. So in that sense, the interdiscipline enabled us to be able to see different points of view and with that to build a way of approaching the object of study that, in some way, would detach us not only from personal experience but also from colleagues who are from other disciplines living the same experience, who also many years ago provided us with other perspectives that then necessarily allow one to have a level of analysis that was very helpful. So in that sense, I think that this was essential... in terms of how the different points of view merged to enhance the view we have of the project. And then, well, of course, the specific questions of the expertise of each one who could really contribute and also in that sense, we distributed tasks, we did some... we always did the trainings together, but later, when executing the methodologies, we also thought strategically about how we could empower ourselves. I think it is a very positive experience for all of the team in that sense, in the sense of having experienced

interdisciplinary capacity, but because I think that the program also proposes it from the beginning. I believe that the program even when we work with the specialists, when we had the meetings last year in the mural, in these meetings, what we also had was returns from different points of view of professionals with different backgrounds because we understood this was about the program precisely interweaving the STEAM, the social sciences, the designs... I don't know, I think that there was already something in the structure of the call that made it possible for us all to accommodate ourselves at that time and we felt at some point that something of that was raised resonated with us. So [00:31:31] yes, I would say that I did know the value of being interdisciplinary. I had had experiences but the truth is that what the program did was really fitting very well with what we proposed. I also believe that we proposed this interdisciplinary team due to the characteristics that the program also had.

Interviewer: I think this point that you mentioned of making a project is super interesting, and that it is not very ... that there is a distance between researchers and the subject they study, but rather that they live it as well. I don't know, I think this difference in research topics is interesting, if it is a matter of someone else's problems, or problems that are experienced.

Respondent: Yes, that's something that always interested me. Perhaps also in ideological terms or in a certain matter of understanding that I belong to a privileged class of those who can easily access education. I have a privileged, hegemonic gender identity. If we think about it in intersectional terms, there are a lot of vectors that position me as a privileged subject. But on the other hand, if we think about that in terms of thinking that, of course, within the university, there are different subjects, in a public university, in that sense I had a privileged education and a privileged socioeconomic status. However, that does not mean that in my experience I did not feel or see the inequalities, or that I did not feel in my own flesh certain inequalities and certain issues that are not so obvious out there, but that worked in terms of power relations. That then makes one start looking more on a small scale. I'm always interested... I was always interested in that, looking at the micro scale, in the near and well-known place, which also had a lot of things to analyze. That maybe I was not a... I don't know, a person we could call... those classic study subjects. But I was interested in being able to study that there were a lot of tensions and problems nearby. Because you always think... sometimes there is a discourse from the university, especially in a public university that is financed by the entire society, that we must solve problems outside, what happens outside, and we can give our knowledge and solve problems of what happens outside the university. However, the inside of the university is also the outside in the sense that all those subjects who come to the university come from somewhere. It is not that we are born and raised in the egg of the university. We all live in a certain place, we have to travel a certain amount of hours to the university, we have ideas about a lot of issues, we have difficulties... then what is built in the territory of the university, this idea that the territory is things that are outside. I'm going to go see, I don't know, the sick people or the poor... there are... we have... inside the university there are poor people, there are

sick people, those problems come to the university. And the way they relate to the university space is very different. And the perception that is built of the university space is very different for a person who has to travel by bus and train for three hours to arrive, after having worked all day, than the person who travels five minutes, ten minutes in his car and spent the whole day working on what he had to present in college because they don't have to have another job. Well, the perception of a lot of things from that space is different. So what was interesting for me was that: bringing up the problem. Not going to look for a problem, but seeing that the problems or the objects of study are very close [00:37:02] and go through us. And, in addition, the study of the university space from this perspective is not so developed. And then it seemed to me that I could also make a contribution in that sense. And in methodological terms, as you say, making a contribution regarding doing a study on something that one is embodying, which I think is also a methodological challenge.

Interviewer: It is a bit connected with this idea but, who would you say this project is aimed at?

Respondent: Well, it is aimed at the university community as a whole, but it is specifically also aimed at the authorities, who are in charge. And when I speak of the government of the university, you have to think that the university is co-governed by students, graduates and professors. So it is interesting because it is... when I speak of university management we are also talking about student groups that have political and activist interference within the university. It is not that it is only addressed to some gentlemen in suits in an office. This is not how the university government works. But it is also aimed at the entire university community and any institution because the management of spaces within the framework of the feminist and sexual diversity agenda is an agenda of any institution that today has to ask itself about how we use the spaces that we already have that we pay attention to it. So in that sense, it can also be a contribution to not only the institutions... specifically to the management and government of the University of Buenos Aires, of course to its community, also to the efforts of other universities, but also to any another institution, whether educational or not, that is rethinking what it does with an agenda of demand for rights and the spaces it has.

Interviewer: And what is the community that you help with this project?

Respondent: What?

Interviewer: From planning the project and thinking about the ideology of the project and all this, what did you decide or think is the community that helps with that project?

Respondent: I believe that it is mainly the workers and students of the university. We have to be able to listen to their needs in spaces in which they spend many hours of their lives, in spaces in which many times, those hours that pass are very significant moments that will leave a mark on your academic but also personal experience. We understand

that the university space is not only the space where one goes to study or work. It is also the space for the construction of affective sex identity, as stated by one of the team's researchers, Rafael Blanco. He has developed his doctoral thesis precisely on this, on this idea that the university space for students is also the space for the construction of affective sex identity. It is then in this sense that we do not want to underestimate the experience of space; that not only does the university have to take care of the quality of the content, but also that the experience is also built on the fact that I cannot choose to take a subject that I am interested because it is at night and I am afraid to walk alone [00:42:04] through dark corridors to be able to take the bus that takes me home. And then I stop doing it and I'm going to take some subjects in the morning that don't interest me that much, but it is because I haven't resolved that, for example. Well, that is something that cannot be underestimated. So I think we're going to... the survey was massive. There were a lot of responses, there was a lot of participation and there were a lot of proposals. Listening to that seems to me to be an objective that we want to propose to the university administrations. They can listen to the dimension and weight of the experience of spaces in people. In all people, not only in those in which we sometimes think to define some specific policies, such as a bathroom with accessibility, or a space for caring for the children of some people, but we all have some experience with the space that has to be listened to in order to improve living and the experience of work, research or study.

Interviewer: I also want to know how you have maintained the gender approach throughout the project process, in the different aspects of the project.

Respondent: Well, one of the issues that seems fundamental to me is that from our perspective, the gender approach is an approach that observes power relations. And so in that sense, it was very important for us to build a team that was... that worked collectively and that did not have... beyond the fact that there were formal appointments regarding someone being the director or someone being the principal investigator, another person... Beyond the specific activities of each one, we were interested in creating a team that worked, where all the people who were part felt that they had a voice and vote in the decisions and in the process. That seems to me to be fundamental. Another question that seems to me to be deeply feminist has to do precisely with discussing disciplinary boundaries, those marks. So in that sense we are already talking about an interdisciplinary team. Later the program asked for it with respect to a majority of women. In fact, we are all women except for one investigator. For us that is not fundamental in the sense that we understand the... in any case, it is not our priority in that sense. We understand that gender studies can be approached by anyone. We did find it interesting that young researchers or young female teachers had a space where they felt that their voice was heard and where they were given high responsibilities to develop some line of the project, and that they could manage high responsibility with a lot of confidence on our part. We often know that statistically, young women do not have those spaces. Young women in universities are still the assistants of other figures, who can be women or men but are always other figures. So we were interested in that.

That is on the one hand, in more structural terms of the formation of the team, of approach to how we were going to face the project. After that, it is our entire theoretical framework. We are all people who have been working in a theoretical framework of gender studies for years. So in that sense, our theoretical framework had to do specifically with this that I explained to you before, which is linked to an intersectional feminism, with queer studies, with queer studies in relation to the affective turn, with some authors specifically who work the question of uses and affective turn such as Sarah Ahmed, and with an entire approach that encompasses gender in terms of its [00:47:46] complexity in terms of gender relations and power relations and the construction of generic identity in the university space. So in that sense, it is not that our attention was aimed, for example, at analyzing (which could have been so) how, for example, I don't know, young female students feel about space, for example. That could have been one approach. We were not interested because we understand precisely that, instead of making it essential and establishing an identity beforehand and assuming that things are going to happen to these people, what we wanted to do was seeing what happened in the context of a gender agenda with all individuals. Other of the things that we were also interested in analyzing was the resistance to the gender agenda, which is also a very important agenda and which is growing in Latin America, and which is being enabled by some efforts in Latin America regarding building an idea that the gender agenda is an ideology and is not a possibility of access to law. Well then, we would have... taking a womanly approach seemed to reduce the possibility of precisely being able to analyze the problems around this agenda that unfolds in the university space and that goes beyond whether the person... and then of course that, as the interviews and the survey we made did ask for the specificity of gender, age, sexual orientation, we can then filter and have a specificity and draw some conclusions and some findings regarding whether a certain group answers certain questions, or addressing certain questions. But that was a further step. So in that sense, our perspective was one more perspective from the poststructuralist feminism of queer studies, to think not of a womanly feminism but of an intersectional gender perspective. And in that sense, I think that luckily we were able to find the richness of that approach when we saw what it gave us back. By this I do not mean that some research that aims at specificity and to analyze a certain question of a particular group has no value, but I find it problematic to define a group before investigating. I think that it is an action that is already biased according a lot of findings that one can have.

Interviewer: Yes, I think there are many cases of designing for a discriminated group and not understanding the needs of another discriminated group. It is an important issue. So speaking of this theoretical framework of intersectional feminism, you have talked about the queer issue but I don't know; I am curious to know if other intersections also enter into this study, of this approach.

Respondent: Yes, for example the one about class, because for us it is very interesting precisely from an intersectional perspective, to understand that... especially in such a large community of such a large public university. We have to think that there are 30

thousand students... well, I don't remember exactly the numbers now, but there are thousands and thousands of workers, teachers and researchers, so... I mean 30 thousand students only in the architecture faculty. There are many more people on campus. What I mean by this is that beyond the numbers, we are talking about a very heterogeneous population. And that is also why we were interested in this for example... within non-teaching workers, there are also a lot of differences between who are the people who, for example, take care of cleaning the bathrooms, and those who take care of administrative tasks to issue, I don't know, certificates for example. Well, there is also a [00:53:20] difference there and you have to be able to observe that. And through some parameters of the survey we were able to identify them. That is why also for the survey, we did not do it ourselves, but we hired a person who is a specialist in survey design to precisely be able to do a survey that could give us... they always have a certain bias but we could not methodologically launch ourselves to do something that did not have a precision like that of people who are specifically dedicated to this. In the faculty of social sciences, there are people who are highly trained in these matters. So precisely the research resources also served us to be able to make sure we could... to be able to measure all the variables... not all of them, but there is a large part of variables and details that otherwise, we would have lost. So another issue for example is age. The question of age is also fundamental. The question of how many years have they been going to university. And those responses also build those subjects in an intersectional way. In addition, we also asked not only about self-perceived gender identity but also about sexual orientation, because that also provides us with information that we were interested in seeing how their relationship with space was built from those identities. So well, yes, the idea was to be able to have a more complex view of the subjects than just starting from a generic identity such as the young women of... it seemed to us that we had the opportunity, that we had the resources, to be able to have an investigation that was like a base. Because what also happens to us is that based on all the findings we have, this is a first instance where we could have certain results based on the objectives we set for ourselves, but the material we have provides for 10 more investigations. And that is also great.

Interviewer: I agree. Talking maybe about this future, of these 10 possible investigations, how do you think your project will evolve in the future?

Respondent: Well, I am interested first in seeing how the managements are going to react to these reports. Many of the people who participate in the project are also part of some of the university's efforts. So it is also interesting to see in concrete terms how there are going to be some changes in that sense. Then in academic terms, we continue with a university project, financed by the University of Buenos Aires, where we will continue to analyze the results of these questions. We will continue to implement these new methodologies that we learned such as ethnography. And we are in the project not only of the writing of this final report, but of some articles and papers that we have presented. We have already presented them at some congresses. The idea is to be able... for us it is essential that all the findings we have found can be disseminated and can find

different channels so that they can be used, not only in methodological terms, but also in terms of concrete results. They can be taken and used for future research. I know that many of the members of the team are writing doctoral theses, so many of these topics are also part of our personal research. And then also in that sense, we are going to be able to incorporate and develop them and deepen some aspects that this project has not deepened, and that we are particularly interested in. And I am telling you, as a team, a large part of the team belongs to the department of design and gender studies and we continue working on these issues and we continue on other projects. So the truth is that [00:59:13] it has been like an opportunity to strengthen some academic links and also to consolidate some thoughts, some ideas that we had around, some common interests, and we were able to give shape to them. That was very good, and I think we will be able to see it deployed in different actions, both academic and non-academic. More actions in terms of university management will hopefully also occur. Specifically, they have already been calling us from other faculties or from other universities to see the issue of space, interventions in space. There is an echo.

Interviewer: **Specifically, any dreams for the future of this? I'd love to.**

Respondent: Well, I would like that... the truth is that what I would like is that this project generates concrete modifications in the heads of those who manage the universities. Many times there is the myth that... we belong to a university that is very well ranked in terms of academic quality. The University of Buenos Aires is a university of great academic quality, but we do not have to underestimate the quality of the infrastructure. Of course, Latin America has a serious infrastructure problem in the cities and of course also in the state institutions. But many times, it is not only lack of resources but also underestimating the experience in the space of the subjects. So being able to raise awareness about the importance of a good experience in space for as many people as possible is a goal. So what I dream of is that there is a concrete impact on people's daily lives. I don't think design is going to change the world. I think it is more complex; and that only with design we do nothing. However, I do believe in the possibility of these interdisciplinary approaches and I do believe that people's daily experience is fundamental. How does a person access the campus, for example? Because we are talking and concentrating on the destination, where they arrive, at that building, but also ask ourselves and also take responsibility for the quality with which the person moved; that journey to reach the place. We are sometimes talking about hours of public transport where, for example, a person arrives after being two hours standing in a bus, on public transport. And we received that student, with the inequality that implies next to the student who arrived after being sitting in their car with air conditioning, for example. So I think you have to start looking at that... and I am giving you a minimal example of something very basic so as not to give you the most serious examples of some situations of conditions that imply not thinking about space. But I think that we all already know them. There are people who leave the career because they have no place to express milk to continue breastfeeding their children. There are people who leave because they feel intimidated as they feel discriminated against in

terms of gender or in terms of their different corporality. Well, we already know all the more serious things that can happen. For us precisely the most... for me personally, the most serious thing we can think today within the university is that someone leaves the university because of some of these issues. Dropout for these issues is often underestimated. So you have to be able to start paying attention to that and for me it is... I am very grateful to these types of programs in places that do have resources and that can precisely help those of us who work in institutions that generally do not have resources to finance research or that the resources are minimal, that really... the feeling [01:04:40] that I have is that we were able to use those resources to be able to generate a tool, a high-quality device to be able to think about future policies. So yes, I hope that something of... even if it is, I do not know if in concrete terms but in perception, it has to be sensitized and when it comes to sitting at a table to think about public policies within education, we also have to think or place a lot of value on spatiality as a gender perspective.

Interviewer: Let's see what we can do. Now I do want to talk a bit about your participation and the project's participation in the Gendered Design in STEAM program. I am interested in asking how the GDS program has or has not helped your project.

Respondent: Well, for me it was very interesting to share and also know on the one hand... well, let's see. Let's do it in order. First, of course, it is what I said before, the financing to be able to generate resources we have available, but many times we cannot access to them because we do not have a budget of good professionals who can generate a design of a well-done survey, of good professionals who train us in methodologies that we do not know, from good professionals who edit, correct and translate a report, etc. On the other hand, in terms of the specific program, for me the exchange with colleagues, with professionals from other parts of the world and also from other parts of Argentina and other parts of Latin America was very interesting. Many times, from the north, Latin America is thought of as uniformity, as something homogeneous, and the reality is that in Latin America, each country is very different from the other, each culture is very different from the other, and within the countries themselves it is very different, for example, when we speak of the center of Argentina compared to the north. Then we have to have contact with professionals who are thinking about similar crosses or in similar theoretical frameworks or not, but that we are talking under the same theme, perhaps from different approaches but being able to do that exchange, and also know the methodologies and problems they have found, which many times were the same. The truth is that it was very interesting. And I also want to highlight the role of Raquel, the coordinator of the Latin American team, because the truth is she has done a very good job in that sense. Beyond the formal issues, she has had a legitimate interest in being able to help us and cooperate in everything that was necessary and in listening, which is sometimes very important. Not only following the agenda of what the program has planned but also being able to be flexible and listen to the needs of each team, especially in a context as complex as the pandemic, where flexibility was essential and

resilience and the ability to be able to listen and adapt to problems that were not foreseen when the program was designed. So in that sense, Raquel and the rest of the people with whom we exchanged were great, really. Not only Raquel, Kerry, and all the people... you, all the people with whom we exchange for the different stages. I think in that sense it was very receptive. I would have liked to have more exchange with the rest of the teams from the other groups. I think there was Africa and I don't remember what else...

Interviewer: **Asia.**

Respondent: [01:09:50] And Asia. And I think there is a lost in translation that needs to be improved in order to be able to... because there are some experiences that I heard from other projects that were more similar, or that I would have liked to exchange and deepen than with some from Latin America, which are very different than the ones we are thinking or the approach we are thinking about. So I think this division between... it was a bit forced because later when you saw the projects, it would have been more interesting to have instances of exchange and to deepen with other teams. The instances that we had were more of a presentation and not so much of a discussion on any issue. When discussions were held on any question, there was no possibility of so much exchange for the times. It is still very complex. Let's see, it's a criticism... that is, more than a criticism is that I was left with the desire to continue exchanging, which is something that obviously can be done outside the program. It is not that we are asking that from you. It is also true that it is very difficult to manage a program of such a scale and with languages. We have barriers, obstacles are also many, and we also have the issue of connection, schedules, time zones. There are a lot of problems that I understand that are very difficult to manage. But for me... well, on the one hand we have that, and on the other, I think perhaps, something that would have been also good is that... well, I think we are going to do it anyway. For example, it is being able to have an instance of exchange of results, once we have the experience already delivered, the final report already closed, to be able to have an exchange. For example, I would like someone from Asia to read our project. Not only having a return of... but as it circulates, we can have access to the reports that circulate. That seems to be very good to me. I'm interested. I'm interested in reading the projects from other places, not just the projects from Latin America.

Interviewer: **I'm taking notes that help with planning afterward and actually I had a question about this; whether it had been positive for you to have grouped the projects by region.**

Respondent: No, not at all. I think they should have been grouped by theme or by lines... I don't know, no, no. I don't... I don't think it ever helps to separate them in that sense. What's more, I think we should have done... no, I don't think so. I don't think so because it starts from the idea that there is a similarity because they belong to the same region. And precisely the problems that many of us are tackling are universal. In other words, this research that we are doing could be done by you in Canada with the

Canadian space. It would have other characteristics but surely the same thing happens to them. They do not travel for two hours stopped on a train but other things happen to them with space. And I think it was not in that sense... I think that it is always a challenge but well... and that it would also have been complex. I don't know. Asia has a very different time zone than Latin America. It is a bit difficult to put it into practice but, since you ask me, I say, "No, it does not seem the best to me."

Interviewer: And how has the interaction with the sector expert been and what has worked?

Respondent: [01:15:12] With Raquel?

Interviewer: No, with the sector expert that was Ozayr Saloojee and Kathy Bonier.

Respondent: No, it was really good. They were always very open to any request or question. That was... it was very good. Yes.

Interviewer: Well, can you talk more about the sessions of Lab one and Lab two? You've mentioned the positive things and issues within Lab one and Lab two, but can you talk a bit about what helped the project or if it has helped in any way?

Respondent: I think that Lab one had... maybe I have a different... we are used to another type of exchange that is an exchange with more time for reflection. I think it was very good but there was a lack of space so that what we had generated in common could be deepened or analyzed. I think that was missing. That was set. You have the photo of that concept map for example. It helped us to organize ourselves. That was good. There were some questions that you asked or requirements that we did not have organized the way you required it and it was good to do the exercise of thinking about it and organizing it that way. However, it also has that presets that leads to something that somehow is also defined when you designed the tool and the device for the activity. So the result is expected, and I think there is a second instance of analysis, deepening and discussion of that result, which is what makes things appear that were not expected and that was missing. There was no time to have a reflection on that. For example, it was necessary to put some concepts or some authors of the theoretical framework. Well, I would have loved to be able to ask, "Well, why are you working this theoretical framework with the subject you are working on? Why is this concept related to gender for you? Where are you going to work this from?" I do not know; having a more in-depth exchange, starting from the basis that we are all trained researchers or in training and that there are some methodological issues and some theoretical frameworks that we already handle. Then making a discussion a little deeper, as a little higher level, and not only raising what we are doing, but also then being able to deepen. I think that would have been ideal. I understand that Lab two tried to do some of that, but there was also a lot that went into re-introducing what projects each one was doing, when that would have been settled by distributing a micro video that they actually made us do about that our work was going. In other words, the information of all the projects could have been circulated in a different way and those meetings could have been used for questions of

one more exchange... yes, maybe even the experts when they asked us some questions. It would have been good if those questions had been sent before and use the meeting to go deeper into that rather than to ask the question and then have to think about the answer at the moment. Perhaps it would have been good if they sent the question before, that we answered before and that in any case, the expert looked at the answers of several people, and could go from there, get some concepts, some ideas and discuss what he evaluated what was happening in the different groups for example, as something to take advantage of live meetings for something that would enhance and not just be informative and with a... I don't know. I think that opportunity was lost. I would have [01:20:44] liked to have a more in-depth feedback from the experts on some issues that, due to time, was impossible to do. They asked you the question, you gave the answer and well... unless you said something outrageous, they couldn't cross-examine you. They went on to another topic. On the other hand, if they had done it previously, they would have had the possibility of making a more profound and conceptual return on our works. I am sincerely interested in a deep reading of my work, a critical reading of our work. I think there are a lot of people there who know a lot about a lot of issues and who could contribute a lot to me. And then for me it would be very interesting to have that reading with a greater degree of depth than that which was given in those exchanges.

Interviewer: Thank you very much for all the ideas and your comments. Thank you. I just have one last question about the bulletin, if it was useful or if there is something that would have been more useful in the bulletin.

Respondent: No, I think it was a very good idea to be able to circulate and know who we were, what we were doing, what we were thinking about with some cross-cutting issues that I think was what was missing, like the idea of transversal. I think the bulletin could generate it. It allowed us to do that but well, like all media, it has a circulation and then there is no possibility of exchange and discussion. So well, it remains in that production and in that reception, but afterwards there is no putting back to discuss some issues that appeared. And I think that the meetings... to close the idea, I think that the live meetings cannot only be information about updating at what stage of the project you are going and if you had any problems or if you had any... I think that can be settled in other ways, even by mail. I believe that live meetings have to be to put a cross-cutting problem and discuss it, or go deep on some methodology. I do not know, I mean questions that have more to do with that, but that are not brought from the program but recovered from the careful reading of the experts who observe some of the issues that are happening in the projects. Then they can start as from that transversal look that they have, because they can access all that information, bring or return some problem, some theme, some methodology, I don't know. For example, the pandemic appeared. It would have been great if they had given training in ethnography from the program, for example.

Interviewer: I already have notes.

Respondent: It is being recorded anyway.

Interviewer: **Yeah, well, it helps me to have ideas and share them.**

Respondent: And are you going to renew the program? Are you going to keep doing it?

Interviewer: **Well, the future of this is up for discussion.**

Respondent: Okay.

Interviewer: **They are trying different things, but we don't know.**

Respondent: [01:25:11] Okay.

Interviewer: **For keeping a project, this is more... not so much now in terms of participation in eight days but going back to this idea of the future, perhaps thinking about your project, what would help you to maintain this research in the long term?**

Respondent: I believe that now, what we need is, precisely with this report of recommendations, to see what the response is from the institutions and from the different groups, from the different communities to which we are responding in some way. We have to see what the reaction is, and I believe that there that reaction is going to materialize in specific requests, demands, and questions to be deepened. And from there you have to focus. I do not want to foresee a continuity today that is not also given by a specific demand of the people for whom we are doing this... I can have my idea, but I think that it will end up defining that. In any case, anyway, we continue to deepen because the material we have is a lot and I am interested above all, to continue analyzing what has to do with questions of what the pleasant use that is made of space is. In other words, it is clear the university space is to study and to work, but there is also space for a certain enjoyment, a certain display of leisure, and rest. In the university space, sometimes you smoke, sometimes you sleep, and sometimes love relationships are established. There is a whole unfolding of that universe that I am interested in investigating in relation to space. Personally, I am interested in delving deeper, but there are other people on the team who are going to delve into the resistance, for example, to the feminist agenda. Well, yes, we have things to continue with it. But as a team, I think we have to be very receptive to hear what the reaction is to this final report and from there, see what the next goals are.

Interviewer: **Well, you have brought a lot of topics and it is really interesting, but I want to see now if there is some topic that we have not covered, or something that you wanted to talk about, that we can talk about this now.**

Respondent: No, I think I was able to talk about everything and yes, just as final words, the truth is we are very happy and very grateful for the support. We really feel that we have been able to take advantage of it. And well, we would love to be able to continue

in some way finding ways to continue being accompanied by this program that we think is very interesting too. And yes, I would like to know the results of all the projects.

Interviewer: **Perfect. Well, then I'm going to stop the recording. Thank you very much.**



GENDERED
DESIGN IN
STEAM

ID73 - Improving the gendered design in housing and public spaces based on women's experiences in Rwanda

Interview transcript

Interviewee:

Marie Chantal Cyulinyana | Principal Investigator

University of Rwanda

Interviewer:

Dominique Marshall | GDS Principal Investigator

Carleton University

Date of interview:

27 September 2021

Transcribed by:

Way With Words

ID73 - Improving the gendered design in housing and public spaces based on women's experiences in Rwanda

Speaker Key:

DM Dr. Dominique Marshall

MC Dr. Marie Cyulinyana

00:00:00

DM Welcome, Dr. Cyulinyana to our conversation about your project. It's September 27, 2021, and you are in your country late at night and I am in mine in the afternoon. Thank you very much for doing this.

So, this is a conversation about your journey and the first thing that we would like to ask you is a really large question. We'd like to hear the story of your project from as far back as you wish to now, as wide as you wish, in your own words to hear all about the story of how this project came to be and how and why.

MC Thank you so much, Dominique. Actually, we are working on gender perspective and housing in Rwanda. So, to get above end of our project, we thought that this project is very important in Rwanda because looking on where we work, for example, we found out that there is something which is missing in our offices, in our houses. For example, in our dormitory when we are students, there is something really missing so want to bring some gender inclusivity.

When I'm talking about gender inclusivity, I'm talking about for example pregnant women. I'm talking about someone who is sick during the office hour. I'm talking about disabled people. So those people are not really included when we are building our houses or when we are building our offices.

00:01:55

We found out for example you have to walk from the first floor to the fifth floor without for example a lift or without a disabled passage. So this is something that we looked at and then said okay, we have to think about it.

Or another thing is also talking about a safe child. So you may have a child of three months old. For example, women who are working and then we don't have facility for them to take care of them. For example, the woman is going to work for one hour to go and breastfeed a kid, and then she has to come back to the work. So why when we have a children care near the institution, it's going to ease the situation, and then the person is going to be productive at work.

So those are the kinds of challenges and the problem that we have observed during a situation in our country. And we want to bring this using this project because we know that the report which is going, or the funding which is going to come out of our project is going to be public to the policymaker and also the beneficiaries.

Beneficiaries I'm talking about the office people, I'm talking about the students in the hostel. I'm talking about the parents in the houses because sometimes also

you see that there is a situation in our home. So, we want really to change this using this project. So that is the background that we have for our project.

00:03:46

DM Thank you very much. And how did the idea come about? Where does that come from? How did you come to think you would do that?

MC Actually, the idea came out. I didn't talk about it. We have an association for Women in Science and Engineering. And this association is made up of women engineers and women scientists. So, as we have also to contribute to society as researchers as well, we thought that when we saw the call about this, we thought of how we can really contribute to this project because it was something which was really disturbing us.

For example, I can give an example. You found that every time you come to work, you have to go to the restaurant to buy food to eat. While you have cooked at home, you can take your lunch box and then if you have an office or a kitchenette in the office, you could warm your lunch instead of going to the restaurant. Because if you go to the restaurant, there are a lot of, yes, the restaurant is okay, people are making money but there are also other negative impacts on your health. Because sometimes the way they are preparing in the restaurant is not the same thing the way you are preparing in the house.

So we just thought if we have a very conducive environment at our workplace or a very conducive at our hostels, and a very conducive environment wherever we are, we think that the outcome of whatever we are doing can be better than what we are having today.

00:05:43

So, as scientists and engineers, women who are seeing this and who face the same problem while we are studying, when we are working, we thought of bringing a solution. So that is how we did it. That's how we thought about developing a proposal and applying for IDRIC subgrant.

DM So, if I understand well, this association of women engineers and scientists is mainly a professional association but because of the call, you decided to do something new and use the association to actually do some research which is away from your regular research.

MC Yes, exactly true.

DM So it's the first time that this association does a research project together.

MC Not exactly the first time. We have also another one which is ongoing at the moment. We are working with KU Leuven University, Belgium where we are doing a survey on the STEM women in secondary schools. So, why do we have few women pursuing the STEM field. So what are the challenges that they are facing? So we want to see for the early age, what is really handing them to pressure the STEM?

Because we found that also there's a problem. I don't know if also in developing country this problem is already there. But what we found is that we observed that

women are lagging behind. So for example, I am always giving the example of myself. I am the first female to have a Ph.D. in physics in Rwanda. So, meaning that in a population of 13 million, we only have one woman who has a Ph.D. in physics. This shows you that women are afraid of hard sciences.

00:08:02

So by creating that association, we wanted to encourage our young sisters, our young to tell them it is easier. Anyone can do hard sciences, can do physics, and do mathematics, and do chemistry. So that's when we created that association but without also leaving behind other contributions to the society like this one.

Because we found also that women, I'm emphasising on women because women are doing a lot of activity which are extra work, which is not really countable during the office hour. For example, you are going to take care of your kids, after the family, all those things so we want them to be productive. So how are we going to make them productive?

Because culturally we know that in our culture when a girl finishes secondary school, for example, there are certain telling the girl to get married. So we want also to change the mindset of the girls. Telling them yes, you can get married but it's not also the priority. You have to make the career first. So those are the things which really trigger us to create that association.

But also we want to make a hub, to create a hub for women to discuss what could be the solution to societal problems, including the one we are trying to solve using this project. But we are also continuing to apply for more projects and especially those ones which can help increase the number or percentage of women participating in the STEM field.

00:10:10

DM Thank you. So how old is the association then?

MC The association we created in 2015, December. Now it is getting six years old, yes. And I am the president of the association actually.

DM You're the first president you said?

MC Yes, I am the president of the association.

DM Okay so all this is very, very new. Okay, very nice.

MC Yes, it's very new actually.

DM So, if I go back to, thank you for this whole story. So now you've come to this is why you decided to apply to this IDRIC funding project. So what happened after you applied?

MC We applied. Actually what happened, when we saw the call, we applied for two grants. So one was on transport, another one was on housing. So we divided ourselves into two groups. So one group is made of five women, another one is made also of four women. So looking at the background of those women, so we decided those are meant for the transport project because also we need to see the inclusivity, gender inclusivity with transport in our country. And then another

one was on housing, according again to the background of the team member.

00:11:44

So we sat down and then we wrote the proposal. Luckily we got it. So we didn't sleep after getting the proposal. When the call was out and then they said we won, we followed all the requirements and the contract.

And then because our association is young and they wanted some of the organisation which has managed a lot of money, all those administrative stuff. So as our association is under the University of Rwanda, that's why we take our sub-contracts and it is now being managed by the University of Rwanda, URC which is in charge of all the project grants. So, even though we are an association, but we are still young so we don't have staff to manage all those money or anything so we are now under the University of Rwanda which is hosting us.

We are trying to get the project going but with some of the difficulties with this because we are not the one who is managing the money ourselves so we have to wait sometimes. But now things are going smoothly. We have developed the questionnaire. We have already sent the questionnaire to the people who have, the respondents. We just followed everything now and I think we are going to get everything on track so we try to.

And I am the PR and we have the team with the different responsibilities so everyone knows what to do and we are always having a meeting every week so that you can see the progress of the project.

Another thing that we did also, we did all the requirements for this ethical clearance to talk to the authorities that there is a project which is going on. So that if we go and look for the data, there are not going to be complications.

00:14:20

DM Okay, thank you. So then how did you in these two teams, the four people and the five people, think about, how did you design the whole venture? You could have done all sorts of things. How did you decide to do it the way you set up to do?

MC So we could do this together but when we had a look on the nature of the call, we said okay, so instead of working on the same time, because the project could be even one project. But we said no, to facilitate and do things efficiently, let's separate the transport and the housing so that we go deep into the problem.

Because if we could do for transport and the housing at the same time, I think we could miss some data out. So, that's why we said okay, we know this person and this person is good in this so we are going to team up this way, according to the background. Because for example in my team, I have a GIS specialist, we have an engineer, a civil engineer. We have, I am a physicist but I have also some background on gender and other things because I am involved with a lot of projects. We have another physicist who is in the energy sector.

And then when we go to the transport, we have engineers, we have mathematicians, we have statisticians. And also we are collaborating with other people in gender and in architecture so that's how we build the team, based on the background of each team member.

00:16:21

DM And then say within your one, so then you have this challenge of making in your case it's housing, am I right?

MC Yes, in my case it's housing.

DM Making housing more gender-inclusive.

MC Yes.

DM So then how did you go about thinking how in your project when you have a question, how did you think about the means you would use and your method and all that? How did you dream about all that?

MC Okay so we sat down first. We looked at, we started by our small house at home. So the normal house in Rwanda, how is it? How is it built? So what is the essential? What do we have? So if you want to make it efficient, what can you put in? So that was the first question to answer to.

And then the second thing we came up with, it was office. So what is your dream office? What do you want your office to be? What do you have or what you don't have, for example.

Then we went to the public space for example. It is a pity to find that for example, if you go to the public hospital for example and you want for example to go to the toilet if I can say. You have to pay sometimes. Or you don't even have a public space where to go for a small, a short call or something for example, in a public hospital. So we said okay, why really? Do we need it? Or if you go for the restaurant or if you go for the bank, all those public spaces where someone needs somewhere to solve something. So we said okay, what can we do? So what is really needed?

00:18:22

Also, we saw that for example, the way we build houses, we don't think of our small kids for example. We don't also think of people with disabilities and we also come with some solutions. Because in designing the questionnaire, we were also trying to see for example, in a house we are let's say ten people. If we are ten people, for example, we have four boys and you are four girls, and your two parents, so how do you sleep if you have a two-room house? Meaning that boys and girls are going to sleep in the same room? Is it really appropriate? Something like that.

So do we have even a bathroom? Most of the time in our country, the bathrooms are outside so we build a house, we have a common room, we have two rooms. And then we found that the kitchen is outside and the bathroom is outside. Then when we are going for example during the night, how are you going to do? So those are the things that we were just discussing.

00:19:37

And then looking at the situation that we are in and looking also the way that things are being developed, how can we really improve our housing system? So we sat down and discussed and then said okay, we think by doing a survey and really

finding out. We know some basics maybe but we don't know the whole story. So, by approaching people and then discussing with them, we can get more data and then also think of some solutions. So that is how we come up with the ideas.

DM And your sense is that that's also how the other team worked initially to think about the project.

MC Yes. Another thing also those are the things that we all faced actually. I think also in transport sometimes we don't have a seat for example where it is written, for example, a pregnant woman or the disabled people. But I think there have been three years where they came up with a bus where we have a place where disabled people can sit. But before, we didn't have that.

And you will see that people are standing and punching you, all those things. So we wanted to bring something which is really different in the society because we have passed through all those difficulties and then we could do something to change that.

DM So if you think of this whole venture or this whole project in the context of your own professional life, can you make some other remarks? How does this project, you said you're the first woman physicist in Rwanda, you're a university professor. You contributed to create the association so have you got more to say about how at this time in your professional career this project fits? You said also you had some experience in gender questions so could you say more about this?

00:21:47

MC Okay so lucky enough about this, when I see the situation actually where I am now, I am teaching at the university where I also studied during my undergraduate studies. So the way this hostel was, I know exactly how people were suffering or how people were not happy.

So the transition from being a student and being now a lecturer at university level, when also you go to the offices, you found that offices are not really something that you are proud of. For example, a simple example, you go to the office, example it is a common office where everyone is sitting. Sometimes you don't have privacy if you want to take a call. A phone call, you have to go outside.

Or if you do want to do your personal things, you have to change the opposite. Can go to the coffee shop or something like that. So those things. Maybe you are sitting on a desk, the booklet for your student that they don't have shelves. Those are the situation that we want really to improve.

Another thing also is women, for example, we found that the way, sometimes I give an example of toilet. So you know you are a woman, you have period every month and then you don't have a dustbin where to put the pads. So that is something that everyone should think of when they are building or when they are putting some essentials in the building.

00:23:50

So as someone who is well instructed, if I can say, you have to raise your voice because maybe others are afraid to say so. So you have to complain about those things and then come up with a solution. Because if you give why, this can be

included in this situation or in this institution. Everyone is going to go oh. Maybe they didn't think anything about it because most of the buildings were constructed when the men were there.

Because for example, the science building, there were no women in the offices. Maybe it was built for men but when women are inside, they have to think about the situation.

There was one joke my professor was giving me that when she went to the physics building, there were no ladies' bathroom. And there was nothing actually. And then she always complained and complained and complained. That's when I was doing my Ph.D. in South Africa. When she kept complaining, that's when they oh, now we have a lady so we have to put this for ladies again.

So when you don't talk about something, no one is going to know about it. That is the only message that I have. Because you got a chance to speak up so you have to speak up for your young and also people who can't speak for themselves.

DM The room you were describing where you needed to go out to have a phone, is it a room for students or is it a room for professors?

MC Sometimes they don't have for professors, actually. They don't have privacy.

00:25:50

DM So this project helps you address the situation which you know since you were a student. How does it also connect with your professional experience as a physicist? Or your other personal experience, not only as a student but what you experience. And also your professional experience as somebody who knows about questions of gender.

MC Okay so another, I don't have a small kid but I have been seeing women suffering a lot and we are always raising this problem of childcare institute. For example, if we have a university, it is better to have also childcare so that if for example, a woman has a small kid, they can have somewhere near the workplace where the kid can be.

And then if maybe they want to breastfeed or doing or now having a connection a little bit with their kid, they can jump a little bit in their break time, lunchtime. Instead of for example, because the way we are, the situation in which we are, sometimes you have to take a two-hour bus to come to your work. Or you can also get stuck into the jam, the traffic. So sometimes if you go for lunch at your house, you may take four hours on the road to come back to the office. So, instead when there could be a childcare, you could use only 30 to one hour, and then come back to your work. So many women have been complaining about that situation.

00:27:48

Another situation that I saw also, the one I was talking about lunches and also the kitchenette in the offices because most of the offices in Rwanda they don't have these facilities. So, also to make things productive, that was one of the situations that I saw. Because if I take one hour to go to the restaurant, I will also take another hour to come back. And then to take time but you can even work while you are eating your lunch or something like that.

Another situation that people were complaining about was about bathrooms, I think. Yes, the bathrooms also. The situation that I have sighted. Another thing is also the restroom. The restroom, not the toilet or another thing. For example, we should have somewhere for example, if you are not feeling well, a place where you can sleep at your office. For example, you can have a headache, instead of going home, you can have a medical care nearby. So we found out a big institution without healthcare so that is something which people have been complaining about.

Another thing that I remember people have been complaining about which is very also something. So, a situation of people. For example, your period can come without noticing and then you don't have somewhere to go and buy a pad. So they can put those machines where you can put a 100 coin and you can get it. So when they are building the bathroom for women, they didn't think about that situation also. So those are the suggestions that our project also is trying to bring.

00:30:05

DM Good. So another question now. Say you've spoken about Rwanda, you've spoken about your university you've spoken about the communities where the women workers live, houses. So when you think about the place to which your project applies, did you think of the whole country? Did you think of only the cities? How did you think about the communities that your project is serving?

MC So the scope of our project was we wanted to look at offices but the office is not at the university level only. We wanted also to talk to housing offices like the ministry in charge of housing itself because they are the ones who are making the plans. They are the ones who are building those houses so wanted to know what they think before proposing a plan of a house because sometimes you see a house and then you say, oh, why they did this to this?

Another institution is we wanted also to talk to the policymakers. So those are the people we are going to ask questions to because whatever is implemented, it has to pass through them because they are the ones who are making those policies. The housing and everything actually in collaboration of the housing. And for another area is students in hostels. So our project also is going to touch on students and houses.

So offices, we are going to go in different institutions, not only on the university or private sectors and also the institution like ministries. We can also go for some public institution like [unclear] so those are to see exactly. The banks. We want also to go to the hospital.

00:32:27

Remember I was talking about the public space? So if I'm talking about the public space, it means where people go, like a mass of people. So, if we have a mass of people, how is the situation for some places that they need to use? Is it really gender conducive? So those are the situations. We need to go to them because we don't have a lot of public space for example. Apart from restaurants, hospitals, and let's say the park, we don't have a lot of parks, but the one we have, we are going to ask to see and to do some observation, see if they're really gender-inclusive. So those I think that is the scope of our situation.

So when it comes now to housing, because now we are trying. Before the way house, I did a small presentation. I think it was with Carey. No, I think there is another guy.

DM With Tiara and Raquel, yes, I was there, I listened to it.

MC So before, the way we used to do housing, there was a distance between one house and another house so your neighbour was far away from you. But this time now we are trying to put people together in the way we are building in flats, flat houses. So now we want to compare the situation between those people who are living in accommodation and people who used to live before in separation. So we have also, we are going also to have some respondents so how is the situation in centred house if I can say and houses for those who are separated. So that is the scope of our project.

00:34:30

DM How did you go about finding the people that you have or you will interview?

MC Okay it is easier here actually. So if you are telling them the truth and you go face to the policy, so there is a process. So you all start with all the documentation, the ethical clearance, the research permits. And if you have all those documents, they are going to give you a research visa. They give you, they call research visa.

So, with those documents in your hand, anyone can answer to your question. So you have to follow the procedure first and then the respondents are going to be happy too. And then if you show that the study that you are conducting is really beneficial, no one is going to deny you.

DM So in which? Do you have many languages? That people will speak different languages? How do you deal with different languages?

MC We have now four official languages. Our mother tongue, Kinyarwanda, we have English, French, and Swahili. But the most common-used languages are English and Kinyarwanda. And our questionnaire is in Kinyarwanda and in English because some of the beneficiaries are not educated and one is going to have to read for them. And also you have to brief them in Kinyarwanda. Others can also read Kinyarwanda but they can't read English. So, we prefer to put them in two languages because French is coming back but they are not yet there. Yes, and Swahili, not everyone is speaking Swahili but English and Kinyarwanda, those are the two languages that we are really using.

00:36:47

DM Okay and you've not started your questionnaire yet, have you? Or have you done some already?

MC The questionnaire. Last week we sent some questionnaires to the offices in 20 institutions and we are starting to get some responses. But in two weeks we are going to go on the field ourselves because you know when you send a questionnaire, sometimes people don't respond but when you are with someone, they know exactly that this thing is serious.

DM So some of your questionnaires are written but some of them will be spoken?

MC Yes because we are going to do two data collections, qualitative and quantitative. And for the quantitative, we are going to have a group discussion and we have asked permission to have a few staff in different institutions to talk to.

DM Okay, good. So if you think about all that you've said in terms of discipline, you named earlier nicely the professions and the expertise of the different members of your two groups and how you put them together. So could you talk a little more about who you thought would be good for each project and how their disciplines contribute to the project? And how maybe as you were doing the project, your idea of how these disciplines can collaborate has evolved.

So which disciplines are part of the team, what do they bring to the project? And as you've been working for the last year together, has that dynamic shown you something?

00:38:38

MC Yes, okay. As I told you, in my group I have a civil engineer, I have someone who did geography, and I have also someone who did GIS, geography informatics system. I have someone who did renewable energy. And myself who did physics on solar radiation and social sciences. So all the team, each of our team members has done some short course, especially on gender perspective. And also they have different course work that they did, qualitative and on constructive research.

If I can come, for example, the engineer, the civil engineer. For example, she's working in housing company, the company which is building housing to sell or to rent. So you will see that most of the houses in the city the company is the one who is controlling it.

And the good thing I saw about her for example, she can conceptualise the situation, the real-life that she's doing. For example, if we are trying to do the questionnaire, she's going to tell you. Because she's now dealing day-to-day with the people in housing, she knows some hidden things that we don't know. So if for example when we were constructing the questionnaire, she was like no, this is not really necessary to ask, people are going to be like that, you have to do this. So she was really good at contributing to the way people are going to respond.

00:40:43

So, coming to the one in geography for example, so when we were choosing the site where we are going to do the data collection, she knew exactly for example. Because she's like the map of our team. She knows. I didn't know some of the companies or some of the parks. And she said no, we have to go there, we have to do this. So she was wow. I was like okay, I didn't actually know those ones.

But it comes to the physicists, I think that was me, they were like you are the Ph.D. holder. Because I am the only Ph.D. holder, you know everything, you know how to do the quantitative questionnaire because you know they are different. For example, you will find that in quantitative, some are mixing them with the qualitative. So each of the team members brought something. And then there was also someone who knows how to write.

DM I forgot to say that at the beginning, you were now talking about writing, we'll go back to this but in about ten minutes it will have been an hour. I don't know if you

would like to stop for ten minutes and then reconvene. Would that help if we had a break?

MC Yes, we can have a break.

DM Okay, so let's see. Let's finish in five to ten minutes, have a break of ten minutes, and then start again. So you were telling me and then you need to have someone who writes.

00:43:16

MC Yes.

DM And what about that?

MC I'm saying that what we do, one of my, the one who is doing physics, again, he makes the first draft then the second one has to go through it. For example, for me, I read it the last, after everyone has put her input so that I can finalise the final draft.

But what I do most of the time, I give them the outlines and when I gave the outline, it depends on the document on which we are working on, what we do, sometimes I can also give for example, you, you are writing on introduction, the other one is going to work on this and this. I divide on them. If it is a simple document, one has to start with the drafting, and then everyone has to come, and then I can do the last version. So that's how we work when we are writing.

DM So right now have you gone around the disciplines now?

MC Yes, I think I've finished everyone.

DM So when you said everybody has somehow a course in gender, that was not especially for this, is that? What you're telling me is members of your team have somehow all had a bit of training in gender.

00:44:46

MC Yes.

DM Okay, good. So as you work together, coming from different disciplines, you were probably already used to work together in the association. But over the last few months around that project, you told me you discovered how useful your geography colleague could be at showing places that you didn't know about. Any other ways you might have discovered how a colleague in another discipline or two colleagues in different disciplines can actually bring something to the project that you didn't think would be there?

MC Yes, budgeting actually. Because the civil engineer, I think there is a fact that they learn always when you are doing any project, you have also to put a financial thing. So, she's also good in budgeting so sometimes she knows how to deal with those numbers and she helps a lot, yes.

DM Good. So when you say you are all a bit trained in questions of gender, what ideas of genders do you think your team brought to the table? You spoke about the lack of education of girls, you spoke about the blindness to questions of the needs of women in buildings. So what ideas of gender are around in your team that you

would like to share with us?

MC Okay another thing was science being a male-dominated subject. And also the way when you see the way the buildings are made, it's male things. So it's not really feminist if I can say. So they come up why, why they are always, you know? So they wanted to change something in this perspective.

00:46:51

And another thing is how can I say this again? The way the leadership. For example, if I am the supervisor, so being a supervisor, the way the supervisor treats the male and the way they treat the females, everyone is saying that they are not treating them the same way because they think that females don't have this men-ship I can say.

For example, we found that they were like if I am in the project, you are going to be a secretariat of the project member while the men are going to go and do experimental work, see how things are working. So they always underestimate women so we want to change that, show them that we are capable of doing whatever men are doing and we can even do better. So those are things that we had a common understanding if I can say.

DM One of the things you said to finish on this question of gender early on when you told a story of the project, you said on one hand our association wants to bring women into science and to have careers but on the other, we don't want to deny their experiences as women. So it's not that we want to bring them in the men's world but we want to recognise what they do as women already. And could you speak a little more about that part? That was very interesting.

MC Okay so what I meant by that because most of the time you find that even though you do a work, but at the end of the day, they are not going to recognise you as the one who did the work. So if you have a boss who is a male, he is going to take the credit so we want to change that narrative.

00:49:28

Because if you, and you own the project, you have to go far for it. You don't have to stay underground. So we want to make people visible. We want to make women visible. We want to make women role models, own their own centres. They can have centre of research, they can have their own prototype. They can have patents because those are the things that we want women to shine. So in that, that's why I was saying that we create the association for that.

DM Good. So what about we start to break now and come back in ten minutes? So for me, it would at forty-eight, whatever it is so back at, to me it will be three forty-eight. I don't know for you what that means.

MC For me it will be nine forty-eight.

DM Equals nine forty-eight and then we could try to do the rest probably in between half an hour and 45 minutes. Is that okay?

MC Right.

DM Okay, see you then.

MC See you.

00:50:49

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Speaker Key:

DM Dr. Dominique Marshall

MC Dr. Marie Cyulinyana

00:00:05

DM Hello Marie Chantal. Hello Marie Chantal. Nice to see you again. I have restarted the recording. I realise how late it is for you, so I wanted to thank you again for doing this.

MC You're welcome.

DM Also, I was thinking, you got stuck in traffic on your way back from home, which is part of your study, the fact that people commute for so long and need better facilities when they are at their place of work. So, we just finished talking about how different disciplines contribute differently to your project, and how people have been thinking about entering your project.

So, the next thing I wanted to ask you is your project is in the stream of case studies. You are not doing a prototype, are you? Or are you doing a prototype? You're not?

00:01:18

MC No, no, it's a case study.

DM It's a case study. So, you're not, you have, because of that, there's no moment in your project where you are making something? What you are doing is a survey?

MC Yes, exactly.

DM Good. Okay, so, the next question was about the challenges posed by Covid and the pandemic to your project. I read in your second report, which you submitted recently, that it has delayed many things, but it would be nice to hear you say how that went, how you had to adapt to the new conditions created by the pandemic.

MC Thank you, Dominique. Actually, during the pandemic, as you know, everyone was, we had to stay home. So, we couldn't move or meet physically, so... [no sound], and also how to approach our respondents. So, we used the online means so that we can talk to them and also find out the way we can formulate our questionnaire, because we couldn't formulate our questionnaire without also knowing the real situation.

So, we wanted to know, if we were, we'd be asking are there events [?]. So, we did that online, using Zoom, WhatsApp and also means like Google Meet. We kept

this, because there's been like one year without going to the offices, so it was tough, and sometimes you don't have internet connections. You know? The situation was tough, but we tried to manage it, and we came up with our questionnaire, and it is now out there. Because the situation of Covid now is coming to its end, if I can say, we'll be able to go on field physically and talk to our respondents.

00:03:49

DM Okay, good. Then, okay, may I ask you now more about your interactions with the programme, the GDS programme? How, at different stages, from the call for submission to you filling the application to you getting the application to you carrying on going this way, how has the interaction been with the programme? How did that go?

MC So, as you know, we have the overseer and the coordinator, Kerry. She's very good on what she's doing because whenever we got stuck she was there. She was really helping along, and we have our regional coordinator, Emmanuel. I don't remember the name of the other one, but she even took our WhatsApp number so that she can follow up on the situation.

So, we didn't really lose the coordination on overseeing the organisation. So, they were always asking us how the situation is, and also when we got stuck they gave us some advice on how to proceed. So, I think the coordination was really okay. We didn't lose any track of them.

Also, even though we got some bureaucracy situation with our host institution, they were there to help us. For example, we even came up with budget reallocation because some of the money was not really allocated well due to the Covid. Because, for example, we needed some materials that we were supposed to use physically and that weren't actually necessary at the moment. Then we asked their advice. They said, okay, you can do this, and it came out smoothly.

00:05:58

DM Are there any ways by which... These are technical, very important material ways. Are there any ways by which interactions with the programme that the conversations have helped design the project?

MC Yes, absolutely. Yes. We had at the beginning of the project, we had, remember we had this lab situation, the lab workshop where we met with different project teams?

DM Yes.

MC So, during those workshops, the lab design workshop, they really opened our eyes, because some of the materials, the way they told us to design our questionnaire, sometimes you think that you did well, but when you hear about other people's experience and other people's techniques, that one also helped us a lot, seeing the situation in other countries, seeing that there are common situations or common problems that you are trying to solve the same.

Also, it created, I think there was a project, I don't remember the country, that they even said that we can create a collaboration. We didn't keep contact, but I think

we are going to work hard so that we can collaborate with them because it's kind of we are doing the same thing. So, it is good to see how they are approaching the problem, what kind of methodology they are using so that we can learn something from each other.

00:07:44

Another, we had also another meeting. We were struggling with the tools for data collection, which kind of tool we could use easily because of this Covid pandemic, and there was a meeting with an expert. I don't recall his name.

DM Barak? Barak Unik [?].

MC Yes. He was really, the advice that he gave was really instructive, and we also used the methods and the advice that he gave us so that we could really continue smoothly with our project. So, we didn't keep quiet, even though we also had to get some expert people, for example in other gender studies, so that we can see if the things that we are doing are on the right track.

DM Can you give an example? In your conversations with Emmanuel, your regional experts, do you remember an example where conversations with him have helped shape your questions or your ways of working?

MC Yes, exactly. I remember him telling us, because he had some experience in the situation of Rwanda, and at that time we were struggling to get ethical clearance. So, he told us the way we could go for it, and after applying the methodology that he told us, after one week or two weeks, I think we went for a presentation, and we got it.

DM What about the engineer who was your sectoral expert, Bara Nguni? Can you remember an example of how your conversation with him has helped? Not in particular?

00:09:56

MC I don't really remember.

DM No, that's fine. You spoke about the first lab and seeing how others worked through it.

MC Oh, I just remembered actually, because I think one of our team members asked him the way we can do... Because we were feeling that this Covid-19 is going to keep coming and keep coming. So, we were asking him the way we can do the group discussion with our respondents because, during our collating data collection. So, that's when they came up with the idea of doing it on a conference, like we are doing now.

They were saying that we can do it online, it is okay, because for us we didn't think that the discussion can be done online, but the situation has now come, we can now go face to face. But that time we were trying to see how we can do the data collection on the group discussion without meeting physically. There was another question that you asked.

DM No, no, I just muted there. At the end of the program, we will have, all of the 20 groups will have an exhibit, a virtual exhibit, and I told you we would like maybe to put part of that conversation on it. Have you got any expectations toward this

or are you waiting for Carlton to talk about it? How are you thinking about that final exhibit?

00:11:42

MC I think, for the final exhibit, what I think everyone is going to present, like to give a pitch of the outcome of the project and how the project has helped everyone in the group and the way it is going to help the entire country. So, I think we are going to pitch on our project the good things and the challenges that we got for data improvement.

DM For data improvement. That's good. Okay, now, my last set of questions or themes are about the future. So, you're still about to do most of your fieldwork, and you have an idea of what's going to happen after. You said that you would like to present some of that to the policymakers or to the people who make decisions.

How do you envisage the...? If I ask you to stop a little to tell us more about how you envisage this project to have consequences or to continue or to renew itself.

MC Okay, so, given that the country is evolving, we are becoming a research-based economy, I think we are going to be more innovative in the situation where our housing also is going to be involved in whatever we are going to innovate. So, I think, by reading the report from this project, there are going to be some improvements in the construction of the house, for example.

00:13:32

There are going to be improvements in the public space. There are going to be improvements in all the questions that I have already mentioned before, but also, given the development and also the mindset of people and also the situation of how the science and technology is evolving, I think this will be the grassroots, if I can say it.

Maybe they didn't have a foundation of where to start. So, this can be the start of more things to come in the future. And I think, later on, we are going to have a good conducive environment where everyone is happy and everyone is productive and no one is complaining, for example, about the AC in the office, all those kinds of things, because there has been a project which puts the best on the ground.

DM Okay. If you were to think about, because at this end, at Carlton, where we have been given the role of supporting the projects, we don't really know yet, after the exhibit, where everything is going to go. So, we're thinking with the projects about ways to sustain whatever will have been gained from this.

So, it could mean just stop everything and make sure that all the projects are steady enough to carry on their own way, but it could also be that we might see if there is something we can do at this end to help the projects grow or take the direction they want, and all that.

So, if you were to think of ways by which Carlton and IDRC could help after this project of yours is finished... This is a question where I'm just asking you to dream on. I don't promise anything. I'm just saying where would you like this to go. To be left alone, carrying on in your direction? To be supported in which way? How would you see the future?

00:15:55

MC Okay. As I mentioned, I think this project was for two years, I think. Two years?

DM Yes.

MC Yes, maximum.

DM And we extended it a little, but the idea was two years, yes.

MC Yes, so, in two years little can be done because you know there is the contextualisation of the project, also sensibilisation on what is happening. I know we are going to build or to develop a document, a report, but we can't promise that everything is going to be put in practice just directly.

So, what we need to know, we need to monitor this. We need to put it in the monitoring and the evaluation to find out if our project... For example, we are going to do a scientific assessment. So, this is a situation, when the projects have been done in two years, for example, and then what is now, how is the situation.

So, the situation in five years was before and now five years after, to see if there is any improvement. Am I having really now a good, conducive employment? Am I happy with my office? Is the student happy with the hostel? Does the public hospital have a bathroom, for example, for anyone who is coming?

00:17:30

So, when I go to the park, do I have anything that I need? So, we are implementing, or we are conceiving a document or a report, but we don't know if the policymaker, the engineers, the Minister of Infrastructure is going to endorse what we are giving them. So, we need to keep following up the recommendations that we are going to give to them, and then see if they can put some of them in practice.

Maybe we want to see if like 80% of what we proposed is being put into practice. So, we'd be happy to have a fund which is going to do this monitoring and evaluation situation for projects.

DM Very nice to hear that. Okay. Any other wishes you are thinking, or that is pretty much the...?

MC Another thing I think, when it comes to these kinds of projects, the way it is designed sometimes, apart from what we do, it is a project we are implementing, we are trying to take some time off our work and then we go through the project. But the way it is designed, I think maybe it's not like being a money-oriented person, but sometimes when you put your efforts some assistance is needed.

For example, such an allowance is needed because we are doing research and out on the field. Sometimes we have to hire animators [?] but people who are more involved in the project don't really get something, like a salary or an allowance.

00:19:22

So, it is really good to have a motivation sometimes, apart from what you are getting for your daily salary. So, if you are doing research, maybe people also

can think of a personal salary because, for example, we are going to pay if a consultant is coming and then being paid.

Sometimes some of the work that the team project can do, but because it is written in the budget or even the way the project is constructed, we have to follow the rules. So, we think that also people who are involved in the project, maybe they can also think of the way they can give them a little thing to motivate them to keep doing the project.

Because you find out, okay, maybe some of the team members there's nothing. Sometimes you are busy with other work, and then when you call them for their meeting, they don't respond quickly because maybe they are doing another project which is more beneficial in terms of finance, I have to imagine, than what we are doing now.

So, it is a subproject, a case study, which is really beneficial, which has a big impact for the society, but also we have to think of the situation when it comes to financials.

DM In my university, it's part of my wage that I do things like this. What you're saying is that you're already doing all what you have to do for your university, and this is extra time? It's not within your usual time.

MC Yes.

00:21:06

DM So, do you know of any other arrangements around the university where some funding agencies actually do that?

MC Yes, for example, like today, we were in the meeting, and we were talking about this situation. We found that, most of the time, the way the grants are managed or the grants that people, they are giving a grant and then they say that there is nothing to give to the researchers who are implementing it, which is sometimes...

I think that research, I don't take it good because you have to spend your time. For example, if you have spent a lot of time on that and the money is being managed by the other people who didn't even spend a night on it when they were writing the research proposal. At the end of the day, they are the ones, because they are managing the money, they are the ones who are being paid, and you don't get something.

We were having a debate, and then we said maybe we should change the policy on the way things should be. If someone has applied for the grant, they can put some wage on the salary because it depends on how much he is applying or she has applied for, because instead of only giving her the salary sometimes this...
Yes.

DM Okay. That's all I had, and we had in mind. Is there anything else you would like to say about your project?

00:22:48

MC The project, at the moment, is promising. Before, I was afraid that it was not going to go through because of this kind of bureaucracy that I mentioned before.

But, at the moment, it is really promising. We are on the right track, and I think we are going to make it on the right time.

So, at the moment, the team is active. I'm not complaining as a PI. So, I'm happy with all my team members, and I am also grateful for the oversee leadership and especially the coordinator, Kerry. She is really following up. If someone is not talking, she asks if everything is okay. So, this is a good thing of keeping people motivated and also active.

I also think everyone, the sponsor that you gave us, we are going to make sure that we do the recommendation.

DM Are you going to be able to come to the workshop on prototyping? There is a workshop coming.

MC When is that again?

DM It's coming, let me see here. It's coming in late October, I think, and I know your project is not about prototyping, but everybody is invited, even people who are not prototyping, because I'm sure you will find it interesting.

MC [Overtalking] because you can get another prototyping project to apply for, and then when you have that training it can help a lot.

DM Let me just see when that is. I'm looking at my calendar. It's around the 20 or the, I think it's on the 22nd of October. So, have a good look at it, because it will be wonderful to have you over.

MC Yes.

DM I have to say that, for us to have the opportunity to work with teams like yours has been, so far, marvellous. To be able to be around and watch how you conduct your research in your own circumstances and how you think about gender in your own circumstances has been invaluable. It's been a real pleasure. So, I hope we continue to work together.

MC Thank you.

DM Okay, all the best to you and your family, and I hope we meet again. Goodbye.

MC Goodbye. It was nice. Bye. Thank you.

00:25:28



GENDERED
DESIGN IN
STEAM

ID50 - Designing mobile services for ageing women in Malaysia

Interview transcript

Interviewee:

Chui Yin Wong | Principal Investigator (*at the time of interview, then Co-PI*)
Multimedia University (MMU)

Interviewer:

Dominique Marshall | GDS Principal Investigator
Carleton University

Date of interview:

14 September 2021

Transcribed by:

Way With Words

ID50 - Designing mobile services for ageing women in Malaysia

Speaker Key:

DM Dr Dominique Marshall

CYW Dr Chui Yin Wong

00:00:00

DM Good morning or good evening to you and it's very nice to have you with us for this interview. The first thing and really the main thing that I want to ask you is to tell us the story of your project altogether.

CYW My project... I'm from Malaysia. Basically the project is about designing mobile services for aging women in Malaysia. What we do is, we find that Malaysia, we'll become an aging population in 2025, it's not very far away. And we predict that, especially even right now that in the COVID-19 pandemic scenario everybody is moving or transforming into digitalisations. And it has become more of a challenge for the elderly. How can they actually still access internet and even the digital tools and all those things for them to get information?

Even to get access, to what's happening around them and also around the world. And I know that these things weren't that serious, there was a gap especially for internet. Yes, that was what I was concerned about, Dominique I'm very sorry. And back to it, especially...

DM And we will edit these things out, don't worry whatsoever Chui Yin.

00:01:49

CYW Thanks. There was a digital divide gap for the elderly. How can they access and use...? Get access to internet, especially if they use a smartphone. And I've been a principal trainer for U3A in Malaysia since 2013 until right now. I've been teaching or giving training to senior citizens on how to use smartphones. And now we also call it another course called digital skills. I did it when I was face to face but the whole thing was... The situation was it was stopped because everybody didn't know what to do especially since COVID-19 happened last year.

Then suddenly now the U3A said that it's time to move on into digital online and then it started to be called digital transformation. And there was huge eagerness for elderly that actually moved into digital transformation. And our project actually is not because of this U3A training. But what I want to say is, our starting idea was, I was thinking when the elderly get access to digital skills and all those things, there's a gap. I noticed there was a gap that... But the gap where, I won't say typically gender. And how will they get access to internet, and what they learn.

And interestingly those who come for courses are female. And I was like, wow, I thought most of the time, to be honest, we noticed that females actually they are not very balanced in Malaysian context, in using the computer skills. But when it comes to using mobile phones, smartphones, especially using WhatsApp as a main point, you will find that they are very active as compared... I wouldn't say the

males are not but of course it's just a general anecdote, doctoral assumptions, and all those without any more scientific data in that sense.

00:04:09

Because in Malaysia our DOSI [?], Department of Science and Innovation, we don't really document until even our MCMC, Malaysian Communications and Multimedia Commissions. Then they don't really document until which gender uses what especially at this age group. Because the focus in Malaysia is still I would say our population, is still demographic, is still a lot of young people. But I would say that we have a rising aging population. Then I started to wonder, especially when we come to mobile services, most smartphone the penetration in Malaysia already exceeds 100%.

That means everybody has access to a mobile phone especially smartphone. These days you can't find... You go into any of the mobile shop, you can't even find a single video phone anymore, people come, you know and it's very difficult. That was a challenge but at the same time it means that from over these few years when I had that uni training and also my PhD is in gerontechnology. And I come across where the elderly are struggling to use mobile services. And I also started to see some patterns from the gender.

How were they interested and come into using a smartphone? There were interesting things where there's further things which we can actually delve into to understand what kind of mobile services for aging women that can... As compared to aging men. Which means, what are their interests and all those. Because the perceptions that people think is that men are usually more tech savvy as compared to females. But is that so?

00:06:05

Especially we know this in the Malaysian context is that the smartphone was passed down or a second-hand device from the children or from the spouse. Usually they don't install any of the mobile apps on their phone, they actually don't really know how to install. To be honest all the years that I've been giving training or teaching the seniors in U3A to use a smartphone. The thing is you know how to download mobile apps from Play Store and app store, and they really don't know.

They say, my phone, everything was given to me and everything was already installed. If I don't know what to do, then most is, if my grandchildren have time they will do for me. If the grandchildren don't have time, they have no choice. That's why I come to this course, because I hope to learn something by myself because my children don't have time and they're impatient and they don't have time for me. And the most is, I go to the mobile shop and they can just do for me. But I don't know what they will fix and how they will fix it.

Those are the issues that I've come across and over the years. And one of the things that triggered them was WhatsApp was the one that triggered them to adopt a smartphone. That's a major one of the reasons and all those. That's our project, our project is actually looking into what are the...? We're looking at it from the gender perspective of course because these projects are related to gender design. And even looking into the elderly population in Malaysia.

00:07:42

Obviously it's general because we're looking on a small sector especially in Selangor, the major city. That where... Especially how mobile phones are being used in a context of integrational family situations. Because in Malaysia, the family situation was, I would say there was an Asian concept where the elderly is more female... These deep concepts of the young, the children should look after their parents when they're old. They stay together, there's a sandwich between the grandchildren and then the grandparents, this kind of scenario.

Usually the family, they are staying together with the parents. At least one of the children if they're not married is staying with their parents, the elderly single children. How is the smartphone being used? And sometimes we find that there was a lot of interactions between intergenerational or even with the family member in groups. But of course there are also elderly that are staying by themselves without having children. Because especially with the COVID-19 pandemic we had the MCO, the Malaysian Government Movement Control Order.

There are restrictions of people travelling across the state and all those. You can't really visit parents that far away. What can we do? The only way that they can contact is only using a mobile phone but we can't physically do that. You come across a lot of news and all and with the spread COVID-19, they say the parents are sick. And then what they will do is, they have to ask their neighbours or relatives around to help them to do this. There was a lot of things and issues that we can delve into in the context.

00:09:39

The research method that we used is, first we use secondary data, we resort to DOSI Department of Science in Malaysia. we look at the correlations and associations of how the digital tools are used and also the family income associated with the aging population. And we have done that data analysis especially my project team members. We have five project members including myself. Two are statisticians, so they are very good I would say. Now we're moving to the second phase of this. And how actually help to inform...?

We are using a case study because of COVID-19 elderly, we can't really meet each other face to face. We have been trying, first we wanted to go into a focus group and then go into demography. But it was like, how can we do it online? And I was thinking it was impossible to do in digital demography [?] with the elderly and in the family context. We were looking into the case study and we were interviewing the elderly and also the family members. What was the context of the interactions of using mobile phones in the absence of face to face.

And I looked into whether there was a difference when it came to different gender and even social cultural contacts. Not just because you are aging women and aging men, but what the social interactions from the social cultural perspective and all those. It can be the family, of course the main one we choose is intergenerational family. If not there's also just the elderly but they're staying together, how they use. Even like far distance with their children and maybe how they use especially now with COVID-19.

00:11:37

You know the elderly, they cannot escape from using smartphones because we are now using the chatting apps now called [non-English]. Wherever you go you need to scan a QR code for you to enter the shops or anything. And even for vaccinations and all those things, you need to use the apps. It was interesting how... We wanted to look into it how... What are the issues and how they were used even among the elderly. And also across whether there was any emerging gender perspective that helped to inform for more mobile service design in Malaysian context.

Sorry Dominique, is it very long, my explanation?

DM No that's the idea, we wanted a long story so that's very nice of you. Thank you for this, it's really interesting. Maybe now what I would like to ask you and maybe some of that will be the same as to connect your research project. And in a way how you came to this in connection with your professional experience. And you mentioned that a little in the beginning that you were used to train, and you watched the reactions of elderly people. And you watched the differences between men and women, you already mentioned that.

But if you could take the time and stop a bit longer on the connection between putting that project together and your professional and your life experience.

00:13:21

CYW I see, let me elaborate a bit about my profession. I'm a train user experience professional. Very interesting now, I mentioned earlier that I'm in a job transition. I'm in Multimedia University in Malaysia, I have a hybrid role so far. I'm a senior lecturer in that faculty in my university. And also at the same time I'm a consultant in a commercial arm of my university. And coming soon, I'm leaving an academic role into an... I'll be working in a multinational company. Basically Intel, I will work as an UX consultant in the coming October.

I would say in my whole entire profession I'm very passionate to see how users, that their voices and their needs are integrated into the product development life cycle. And of course my PhD is in gerontechnology. I study smartphone user interface for the elderly in Malaysian context. I see how the elderly struggle using smartphones and mobile apps and all those things. Actually it started from many years ago, more than 20 years ago when I started caring for my mum. I saw her struggling using...

And I was thinking this, how can I actually...? If one day I'm in a position to help to improve the elderly to have a better mobile service or mobile apps or any digital tools. I learnt a lot from all my users to be honest throughout my professions. And of course I do research and I also do consultancy in this area. And I have a strong empathy when I see some user interfaces of any apps or any interfaces, I'll immediately start to... I don't know if it's just my profession, I don't know what to say. This is getting frustrating, how can I improve this or how can this be improved for the users to use.

00:16:24

And because I find that... Because how can we improve at the end of the day to improve the digital tools or technology or products design. To ease the life, to make

people happy and also to improve the quality of life. And I particularly have an interest in inclusive design, the elderly was part of it because of my PhD work that I do. And that was where throughout my profession that I see especially in my studying my PhD in gerontechnology.... The method I used was mobile use interactions study.

I have 80 other students that I observe one to one and are female and 40 are male. And the time that I start to see some interesting patterns that I can actually derive from there. And the most important in general is how I see the elderly use the mobile phone and also the digital tools from a few occasions. From my personal family context and from the work I have, from the U3A training over the years. And of course a lot of other observations where... And stories I've come across. And that is where...

It gave me the idea of how I can improve the user experience and quality of life for people through using... Especially using some digital tools and technology that what I might want to highlight. And I do want to particularly say that especially for females I know there's a lot of times their voices have been marginalised. And especially elderly women and they find a lot of the time they have to follow the male dominated family relations. And they may not have their own choice when they come to certain things.

But when they start to adopt using smartphones, they started to access... Interact with their peers especially through social media like WhatsApp for example. I noticed that they have become very active. They are not... From those groups that I accessed for the study, people think they are not so tech savvy. Actually they are very active, it's a major sell of the aging women when they become themselves. Because maybe some of them have not had the chance to...

00:19:37

They find that it's not necessary that I must be tech savvy in solving any mechanical problems. But through using those communications apps they learnt a lot more. They are more active in sharing things, or even sharing information, pictures, videos a lot more. And to be honest throughout my observation and also even through the training and research with the elderly, wow you cannot imagine... Especially recently since COVID-19 until right now I'm still teaching them.

You know what they've been learning? They've been learning online shopping and they do a lot of food apps. That's at least what I do with them because it's a request. And of course we do a lot of e-wallet because it's compulsory for everybody in Malaysia to use this e-wallet. And then now they're eager and we're in the third week of teaching them how to use Google products. Google Workspace and all those products. And of course very interesting, even like Zoom.

The first time they're very frustrated because they always cannot hear the audio because in Zoom the first time you need to always choose computer audio or something. And actually to be honest a lot of times they are very frustrated because they find that I cannot hear them. Because why should there be two options? If I'm from a user experience point of view, it should be more direct know how to detect and you don't even need to choose. Because for seniors they are not that tech savvy to tell you which one to choose.

00:21:14

And they can't find why can there not be any audio, that's just my personal opinion. And of course I do not represent Zoom and I do not represent Google. Throughout a lot of those training I start to see how they struggle using the tools but at the same time they also find it very fascinating and exciting. Because it helps them to perform certain daily tasks in their lives. That is what I noticed, there's to me some kind of sense of fulfilment when I see empowered seniors or the elderly for digital transformation journey as part of their lives.

And especially in the COVID-19 pandemic because they find it is so important for them to learn some digital tools or apps. Because it's become mandatory that everybody must have a smartphone and how can they get to use their smartphone and all of that. Especially now the situation, everybody can't go out anymore. I don't know about... Dominique which part of Canada are you from? Sorry you are muted.

DM I'm from French Canada, Quebec initially. But now I've been living for half of my life there and all my professional life in Ottawa, the next province in Ontario, about 150mi from where I was born. And you, in which...?

CYW Where am I living right now? I'm living in Cyberjaya, one of the... Cyberjaya in Selangor, but my hometown is in Melaka. But I've been to Canada, Quebec, the French province many years back. And also to Toronto and a few of those because of some of the international research network that I participated in.

00:23:30

DM I've never been to Malaysia so you're better than I am. When you talk about... I've just asked you about your professional and more personal experience in this project. Are you thinking about the whole of Malaysia, where you come from, the place you are in now? Which community are you thinking about?

CYW I would say I couldn't say for the whole, entire Malaysia's elderly, of course I was a bit too ambitious. But from the elderly that I'm especially exposed to is urban and suburban areas. But not really rural areas, I think rural areas would be different types of challenges. Especially language issue is one, technology exposure is definitely one. If you ask me the kind of exposures that they have, especially in urban and suburban which I'm exposed to.

Which means they still have a chance to own a smartphone at least to a certain extent. And then some of them of course, Malaysian elderly can either can speak English or can't speak English. If not then you speak your own dialect. For those who are able to come to reach a certain age and understand, they are considered a niche community group because for the elderly they will still enjoy lifelong learning at this age. And then I would say to a certain extent they are niche and they are educated to a certain level.

00:25:16

They're educated to a certain level, yes. If not some other elderly I would not think that they would want to join this lifelong learning programme. Because they've got a lot of other programmes when you reach a certain age. They have, of course technology sector is one of those. And they have others like gardening, like

cooking, language, spiritual and a lot of others as well. But of course the language is a used to conduct... The commanding language that I use to conduct training was either English or Bahasa Malaysian.

But I also noticed that some Malaysians society contact says either you speak Chinese or Mandarin or you speak Tamil. Malay of course is the Bahasa Malaysia is the main commander language. They feel more familiar and competent using Malay. Sometimes you will switch between languages and that depends on the context and the group that you're targeting. That is only suburban and also urban areas.

DM And do these apps on these phones, if they don't speak English, are they all available in the main language of Malaysia or you need your English to access them?

CYW You need English because the apps were developed by the developers. Whatever languages were provided then you just had to accept it, unless the developers have given you the different choice of language in the app, if not then usually they are in English. That's why people like my mum, she barely understands English. The biggest challenge for her is to use... She can only limit herself to use certain actions that she's familiar with. Not so much for these other apps which she's not using a lot of, that she's not familiar with for example.

00:27:31

It gave me some thoughts where that quite are different. And I also came across that some apps especially for apps designed in China, are very crowded. But there was always a debate and also interesting issues that you ask professionals, why are apps designed in western countries especially from Scandinavia are very minimalist. As compared to China, their apps are very crowded. But sometimes has been studied and it was very interesting to ask a professional but that's [unclear] because we say in China because they are... How do I say that?

The whole society, they're very fast moving, it's very crowded and it's actually very strict. They this one time had presentations which I attended for UX forum and all those kind of things. They show from the society, the interactions and even the structure of urban inner-city, the power planning. And how it will transform into the app's design. And also there was even a social cultural context and it was very interesting where these kinds of issues were brought up.

If you ask me if there was any gender design issue, I think to a certain extent, yes. It can be from either user interface point of view, from the choice of colour. But are we giving any of the users the choices for them to choose their preference rather. I won't say in general females like something more feminine. I won't say that because it depends a certain characteristic and all that. But I also think that we cannot stereotype the gender that you must like a colour that's more feminine or not feminine.

00:29:47

But I would think that the combinations of the colour scheme and all those things, it represents a certain kind of mood. And also emotions of where you want to your users to have when they use a certain app or user interface. That was very

interesting and also I think for me is even when it comes to mobile services, my idea was beyond just the user interface, it becomes the use of it. And it also involved the mobile operator and even the social cultures context where...

We have to think about Malaysian, we talk a lot about family. The family, we talk about extended family and how actually they will be involved in the family itself. And also the interactions, let's say for example the elderly with others. If the elderly, they themselves hear a lot that they... I would say they would not usually that the initiative to find out more. Usually they learn from either their peers or they learn from their children. Even the devices are passed down from younger children they say, mum or dad I already used this, I want to go and change to the latest phone.

I think this is still usable, I just used it for one or two years and passed it down to you. And so there comes a scenario where how can we actually allow...? What kind of mobile plan for example, the expenses that are involved, who's going to pay for it? If someone's elderly, tired and they no longer earn an income. From those research I come across when I ask, how do you get the expenses and all those things? Some will say of course they're no longer earning an income so some of them is the spouse paying for them.

00:31:45

I had no idea how much it actually the monthly expenses are to be honest. Especially for the females during the study that I did for my PhD work. One of the questions I asked, the monthly expenses. How much did you spend for your mobile phone? And they said, I have no idea because I didn't pay for it because it's my spouse or my children. It's part of the family plan and I'm one of the dependents and even if they do have they say they spend very limited data.

They pay per month so that they don't go beyond that, these kinds of things, because I have to be more cautious with spending. And some of those costs they say, for mobile expenses, I will pay but maybe the phone was given as a birthday gift or that kind of thing. It was a very interesting that where they were... We come across those kinds of things where you said you wouldn't decide on mobile services. Two things are, are we creating a lot more awareness for the elderly, can you make your own choices this?

The second thing is do you know what to do with it even though you are given the choice to choose in terms of mobile services or even a mobile plan. The good thing is, do you want everything to be arranged by... Be given and all these things by family members or others. Or the third one is no one is... You like to make your own decisions especially when it comes to technology use and all those things. If you ask me, it correlates to the elderly in terms of their education, the exposure to technology and also the family, the support they have.

00:33:48

For example, I give the example of my mum and I remember to be honest her first... I would say she was at least... How many years? I can't remember the years. I think at least 78 years or whatever. She didn't insist to use a smartphone. But one of the reasons that she adopt was because she wanted to have communication chat with my daughter and see her grandchildren. She said, okay,

why don't I start to use because that time we didn't have WeChat, we had Viber. I don't know whether you know Viber, it's just a communication app.

We started using Viber. Of course that time we didn't have video call, so Viber. And then we started to use WeChat, sorry not WeChat... What's the name now, I forgot. Rime, R I M E, I don't know whether you know about that. You don't know. Those days before WeChat, before WhatsApp, before video conference tools weren't around, we used Rime. That's how she started because wanted to have more communication with her granddaughter, that's my children.

And then she was resistant and then she started using, that's the reason she was pushed to adopt. She always received a lot of photos and videos from me that they share. This is how people start to get it something where they will see it's not because she's not good at technology, it's because they find a purpose to use a certain product or for certain tools where they [unclear]. And where I come from, a lot of... During my research I also noticed how they adopt because they say, I'm not very good at using technology, computers, everything.

00:35:50

Especially they send a lot of spam and they're very scared of spam. Very scared of using a lot of... These things of what if I press incorrectly, what will happen? This is the fear they have especially the elderly and all those. But at the same time they also find it exciting. Why? Because the little, small device that plays a role for them where they can communicate with a lot of others. Of course I think Rime is no longer used these days because things started to move into technological progress with WhatsApp.

We have a lot of video conferencing calls and all those things. People start to move into these and it's really eye opening for them. When I was asked to do training this year through online, teaching online training, I couldn't imagine myself teaching online training for the seniors using Zoom. Because they have to learn, they have no choice but to learn how to use Zoom, video conferencing. And before that everything was face to face.

Of course there's no choice because some of them still want face to face because there were challenges because some of them couldn't follow. Some of them still... But I still lead because they are ready to learn, come to digital transformation skills and all those things. If you ask me I would really like to see the empowerment especially coming from resistance to adoptions. And then slowly they are becoming adopters and slowly they become familiar to begin mastering hopefully one day. And I was surprised at where we thought a lot of the food ordering apps and all those things are only for young people. But these days because of COVID-19 everybody had to stay at home.

00:37:55

The elderly said, please I also want to learn how to order food, order groceries especially because they don't feel safe to go out. Can I order only grocery through the app and all these things? So they learn. And I remember there was once one elderly woman, she told me, Ms Wong I was very empowered, thank you. And I said, why? Because you taught me how to order, use shopping apps and other Lazada shopping. I'm not so sure Dominique, where you are, you have Lazada

shopping, I think no because...

DM We have other apps for shopping but not that one.

CYW Lazada, no.

DM Not that I know of.

CYW In this part of the world, a different part. For us it's very famous and you know what she told me? I even managed to order brown rice through the shopping app. And you know what? At first my husband didn't really support me in this but when my husband started to see I successfully managed to order the brown rice and deliver at home. He also wants to learn to use. And I said, you can be his teacher right? You can show him what to do. You see the kind of empowerment of her, started to learn all this through the training.

And then she started to... She felt the sense of achievement, she managed to order her grocery on the shopping app. And then even her husband went from sceptical to became supportive and he also wants to learn. And you can see the influence between the elderly and how the male and female role... Because she told me one thing that I picked up along the way is, I was the one who always had to follow what my husband says. But this time my husband had to listen to me. And I was like, oh wow.

00:39:57

And that was the social interactions, and also entirely in a family where the female in the older generation, the female is a more submissive role. And then the male is the one that's in charge. But once the female is empowered with more technology and they are more comfortable to use and help in a situation. Because everyone had to go digital, online. Unless their children or neighbours or whatever helped them to order things. If not then you have to always ask help from others.

But when they know they're empowered with the skill they know how to do it by themselves then they have the confidence. And then they start influencing other family members especially the spouse. You know the kind of family, flip around that relations this time. She didn't tell me directly but I picked up along the line, I read between the lines about what she said. She always has to listen to the husband but now the husband asked her, can you teach me how to use this? Sorry I'm taking too long.

DM Never too long. I was asking you about your own life and your professional life and then this project. And you referred to your PhD. Can you tell me a little bit more about how this project built on your PhD? What's the difference between when you finished with your PhD and what this project allowed you to do?

00:41:35

CYW My PhD, I mentioned is, smartphone user interface for the elderly. What was the original idea when I applied for this GDS grant and of course I noticed one of these things is when I did... Because I got 40 female participants and 40 male participants, the elderly. I started to see some patterns, I'd like to delve into deeper analysis in terms of the gender design. Or even any of the perspectives of how they adopt and use the mobile services. That was where... It derived from that idea

because my PhD is on gerontechnology especially the elderly.

But I have to be honest, I'm not an expert in gender. At this point I think I'm still... That's why for collecting data with the experts, Yoko and some of the gender experts which was very good. I think our team we are still picking up along the way and I had one of the team members, she's from the Gender Institute. We discussed about... We still think that we don't have that in depth knowledge and also this is in gender studies.

That is what I mean because if you ask me to correlate with a lot of more gender studies, I have to say that it's really not my domain or not my forte. But that's why I think that input from Carleton University or network is important for our project.

DM What's your discipline Chui Yin? What's the discipline of your PhD?

CYW Gerontechnology.

DM What technology, engineering technology?

CYW No, gerontechnology. Let me type it for you.

DM Geron like Gerontology?

00:43:38

CYW Let me type it for you. Can you see it, gerontechnology?

DM You have to send it now, it's not arrived here. Yes I see it, gerontechnology, geron for old people, like gerontology.

CYW It's a combination of gerontology and technology.

DM And so is it a part of engineering or is it a part of technological studies? What's the discipline?

CYW It's an interdisciplinary between gerontology and technology. Basically it's designing technology and product design for the elderly.

DM Very good. As you proceed in this project, can you tell me...? You already told me you were interdisciplinary. You've just told me that you have somebody in your team who's in gender studies. Can you talk to me about, over the last 15 months, how you think about how different disciplines are coming to this project and are helping or enriching that project? Because you said initially you were not trained in thinking about gender.

That was the purpose of this project, to have people who work in STEM think further and question gender. You were exactly the kind of people that this programme was trying to reach to try to think deeper and better about gender. In that context of what you just mentioned, can you talk to me about disciplines? Like you said it's gerontology and technology but now that you're thinking further about gender, what discipline has been able to do what or to help you, how?

00:45:26

CYW You want me to elaborate how our project team member are multidisciplinary and does the...?

DM How do the disciplines interact, yes. If you can reflect on... I'm a historian so I can talk to you about where history might be fitting. How different disciplines are coming together in this project.

CYW Sure, and I would say that I have very great team members to be honest, they are very great. I think that they are very productive and also I would say also very cooperative, my team members are experts in their own field. And I'm also very glad that I have them on board. Myself in gerontechnology and of course I work in user experience. And I have another member who is Dr Ko [?] she's more into learning and also on learning sciences and also on social sciences especially in healthcare.

And then we have Wan Tin [?] she's from another university. He background is on gender studies and also on immigrants and all that stuff. Because I cannot speak on behalf of all the expertise. And that is one of the reasons why I brought her in that time in our group. Because I know her speciality is on gender studies. And then we have Yvonne, Yvonne is an economist. And she also... Very interesting she's also looks into the gender studies especially for the economy perspective.

00:47:21

And then we have Ko is a statistician in aging in Institute of Gerontology, my aging research institution, where I graduated from. When I put these people together I found that all of us, we all have different point of view and everybody contributes in a different way. Especially when we submitted our first gender paper. Talking about aging and also the financial expenses in a family context that relate to mobile technology for the elderly in Malaysia. And with Ko from statistic, Ko from the national data.

To be honest there's how many thousands data. And recently my two statisticians showed my project members how the demographic evolved. But one of the things is our insight is, they look at it in two... How will that make from a macro perspective that contributes to the projects? But I always bring them back, I say, don't forget even though the data was very strong correlations between the family expenses with the elderly. And then when we analysed from the general perspective, from a gender point of view. But we are still lacking on the analysis on the social culture context and all.

And I said the reason why is that it's very important when we move onto the second phase which we are still doing it because from this project, we'll hire a GRA, an assistance teller [?]. She was also learning and especially with input from Yoko and also had input from Tracy.

DM Tracy.

00:49:28

CYW Tracy, right. I think that's maybe your colleague. That was when Yoko was absent sometimes. There was a time where I said, in COVID-19 how shall we do it online for the elderly? Because how can we study in a family context because we can't even visit them. There were a lot of challenges that we came across. And finally, we got a lot of input to be honest especially from Yoko, who was very... Our whole team was really impressed. I was like, wow, very in-depth input which we never

thought about.

Last time we only thought about focus groups, but I don't think it was appropriate because COVID-19 and everything online. We had to change the research method that we used and also with Yoko's input that we should do digital app demography. But we had some debate and discussions in our group and then we find that digital demography may not be suitable. Because usually you study a group of people in a digital community. But in this case, the elderly, we're studying in, maybe in the family home.

There's more community, you're not like on online games. You know you study a group of people are gamers and how they play games and all those things. We found that even though this was recommended or suggested to us during our digital demography. But then we found through our internal projecting discussions, we found that this was not suitable. Then we found that actually it's best to come back to use a case study, we use a multiple research notice. We will use interview and then we will use a diary study and then we'll couple those with observations.

That is what we're planning to do from the second phase, especially the GRA. How different disciplines will come in place in this project. To be honest we are, I also have the ten Carleton's and two of us especially from the very beginning we asked us to do the [unclear]. Actually we are very... To a certain extent we tension because it was also very fascinating because it really does pull everyone together to have discussions. We have very many lengthy discussions among groups. Every time we have to meet with your network to present our work together.

00:52:18

I think the first day, at the very beginning the first three months, it was very good because I think... I noticed in some of those other projects we would not meet so frequent I would say. And then we work together as a team, and of course with the GRA as a team. And then we discuss and we come together and then we see some results. And we also try to work out, to have our publication, of course the first ones we submitted to a journal, but it was rejected.

But we are now submitting to the second journal, we are still waiting for the review. And the GRA also submitted another journal publications and all those things. It's one of those things where you wanted to see how from our research grant. But I think the most important thing to me... Because all of us are coming from different discipline when we work together on a certain point of view, even for the research method or even from the... You know even some of the points.

Everybody gives different input, but we still come to some consensus and we raise, how can we look into...Of course there are some things that we still don't have answer to yet to be honest. We still don't have any answer for a lot of other things in our work. But because of all the disciplines, everybody's strengths are different we learn from each other. Of course I used mixed method for my PhD work, but if you asked me, I'm not as good as the expert like the statistician. A statistician can tell you all those things, but we learn from doing this with them.

00:54:05

And of course there's some other point of view, some maybe I would raise it up,

how can we link it back in the bigger picture overview of our grant project on gender or on the elderly, whatever perspective. And especially look into... Link together everything and not skew to what's only one direction or one discipline. That's where I think the wonderful part of this, our team members of different discipline, I would say. But I'm not so sure I answered your question.

DM Yes you did. Just these meetings of these different disciplines was thought about by you for this project? You had not worked together with all these disciplines before, these different members of your team? Or was it an existing team?

CYW No, it's totally new.

DM Good.

CYW I thought about what kind of people I want for this project and skills I need.

00:55:08

DM Maybe then my last set of questions is about the future. Now you have phase two, you will do phase two. And I know that Yoko and you are thinking about how to plan this and now you've decided not to look at digital demography. Now you're planning on looking at case studies and all of that. But say if you think beyond your case studies, when this programme is over for you. One of the things that we're interested in is to think about the sequel of this adventure. How do you see it?

How can some of this be sustained? And how maybe we could help from here to do this?

CYW Those are good questions. Of course for me, my situation was, I will hand over my project leader role to my colleague Dr Cho. But of course I will still remain as a project member because of course it's very important for them that they have me continue in this project. And I will see... Because this project we are working on string one, that was more on fundamental research. And we didn't work on string two that was to come out any product or any prototype.

But to be honest because our strengths, some of us are working on... I forgot creative [unclear]. We can actually bring into the certain phase to continue from our fundamental research into the gender design for our work. To bring into the bigger picture if you want to. Of course this one there was a chance for us to move into... Of course research collaborations with you and your colleagues or maybe other research network. And of course hopefully there will be funding in order to continue with that if that is okay because I think that was very important.

And the second one was also through our work, we hope that other people can see what we've been doing of course through publications. But of course very important is, I would say hopefully to see the Master's graduations from our GRA. Because I think the one thing is to nurture the talent through our research project. Especially also because I think all of us are very new to this area especially gender design. You see, I think gender study is conventional but not many people look at gender design. I would think that there was something new.

00:58:00

We talk about gender design even in the service design or even in the design

discipline. I would say gender design is something I would say that is something interesting and new from the design discipline, especially across discipline, gender, and design. And also it can be crossed with technology and those kinds of things, and of course social sciences from a gender perspective. I think that was something new especially even my university. Even my colleagues said, not many people are looking into gender design.

I would say that there's this kind of awareness and also the exposure for us is very crucial. It is how can we sustain...? I think that through... Apart from the work we do and hopefully we continue to move onto the second stage to develop something to impact the gender design into the creative multimedia or even the product design and all those. Of course if in the future there was chance... I don't know because as I said, I'm in a job transition into industry. I would say I can't have a say because I don't know what will happen.

But at least when I'm in the positions like this especially working on the user experience. And I will consider how to integrate with a gender design point of view. Even the car project that I'm involved with will have more impact on society and the community, in the real world. That was the things that we... I can't say whether we will have any continued project because that one it can be on our curriculum and also part of the research project. How we can impact more on gender design.

01:00:01

DM And I'm not asking you to have one, I think we're thinking together about the sequels to all this and how we can maybe design something after or how we close the project and all that. If I think about the future in other ways Chui Yin I could say how have these 15 months of thinking about how gender design influenced your own practice? Like what you will bring now that you're changing your job. Has this reflection opened up different ways of doing things for you or added something to what you will now that you do now that you're moving into industry?

Your whole way of thinking about technology and gerontechnology.

CYW Yes, definitely. I think not only just in gerontechnology. For me I think that... Especially my profession in user experience, I'm more looking into the user perspective but I'm also looking into the interactions from the social cultural but also from gender. How do they interact? What happens in their mind, but how can that have the mindset shift or the paradigm shift? Especially when they interact with technology or new products.

And especially to me is the story or the experience where I observe where the female, they are submissive in using technology. But because they will be empowered by the knowledge and certain skills and how they influence the other party especially the spouse for example, that story I told. But also to observe the day to day, some of the stories that I heard in other channels. How they use the tracking apps, where the female and male, the spouse they find whether it's helpful or unhelpful, on tracking each other.

01:02:21

That gave me some thoughts of, what can actually...? The inclusive design, the gender design plays a role in the sense that creating awareness. Hopefully this

one can be transferrable when it comes to that kind of industry work that we're going to be exposed to. I hope I gave you some kind of answer.

DM I see that you're coming towards ten and maybe it's a good place to stop. If we could talk forever about this but I've covered the main things that we wanted to hear from you about. I don't know if there's stuff that you haven't said that you'd like to say before we go. But otherwise I'm ready to stop, I hope that we will carry on exchanging, that was really nice, thank you.

CYW Thanks Dominique for all these things. I hope gave you some answers from all the questions that you asked. Thanks very much.

DM Thank you very much. What I will do is send you the interview, I will send you this video and I will send you the Zoom generated transcript. And then you could tell me if there are parts of all this that you would like your name not to be associated with. And if there's parts of this where you would like the recording not to be accessible to researchers. And then after that I will take the rest of it as a yes. I could put that into the archive, we could use it, we could put your name on it. But I will see what you would like to exclude for your name, and you exclude for the researcher. Thank you very much and have a good night.

CYW You too, have a good day, bye.

DM Bye.

01:04:25



GENDERED
DESIGN IN
STEAM

ID38 - Designing for support against workplace harassment for low-income women in Pakistan

Interview transcript

Interviewee:

Maryam Mustafa | Principal Investigator

Lahore University of Management Sciences (LUMS)

Interviewer:

Dominique Marshall | GDS Principal Investigator

Carleton University

Date of interview:

24 September 2021

Transcribed by:

Way With Words

ID38 - Designing for support against workplace harassment for low-income women in Pakistan

Speaker Key:

DM Dr. Dominique Marshall

MM Dr. Maryam Mustafa

DM So, good morning for me, good evening for you, Doctor Mustafa. It's the 24th September 2021. And we're doing a longish interview about the journey of your project on designing support services for women, experiencing workplace harassment in Pakistan. So, the first thing that we wanted to know about, and I'd like to ask you is, if you could tell me in the wider possible way the story of this project. And take all the time you want to tell it.

MM Thank you, Dominique. It's wonderful to be chatting with you. So, this project is one of a series of projects related work that I've been doing in Pakistan, over the last couple of years. My work, as a technologist in Pakistan, has looked at the affordances, or the lack of affordances, and the gaps, in how technologies are designed for populations that are part of the Global South, so, particularly vulnerable and marginalised communities.

And in Pakistan, which is a very, very patriarchal and conservative context. The kind of access that women have to technologies is limited. Often mobile phones are shared. Even when you don't have low-income households, even when you have resources, or finances, are not a concern, you will still have women with monitored phones, with shared phones limited access to tech.

00:01:42

And as we start to become more and more digitised, and because technology has such great potential for connecting women, in context where their mobility in public spaces is very limited, so, in Pakistan you will not find women in public spaces. You won't find the majority of women have easy access to markets. You will rarely find a woman-led enterprise, like a physical shop. Whether it's a grocery or a clothing store, you will not find that being owned by women.

And you will not find their presence there as sales people. And which means that women are very, very limited in their social circles. They're very limited in their homes. And where mobility is an issue and your social circle is limited, then one avenue or access that you have to take advantage of different opportunities, or experience different ways of being and doing is through tech. But women's tech use is also monitored, and it's limited.

And so how do you design technologies to leverage the mechanisms that they already use to circumnavigate these patriarchal norms, right, because we find, and my work with women, all of my work is qualitative in nature, and all of it is based on interviews with low income, low literate women. And so, Dominique can you still hear me? I feel like your picture just froze. Hello? Hello? Okay you're back.

00:03:52

DM Doctor Mustafa, it stopped just after the thing froze. It's still recording. It's rebooted itself. I think it's at my end. Just after you said, Dominique can you still hear me. So, whatever you said after that. But I got everything up to then. And then I said, yes I can but I was muted. And then I unmuted myself. And then everything froze. Start again from there please.

MM So, I stopped talking after that because your screen froze.

DM Because you were saying it's all qualitative. It's all with people with low income. And then you stopped. And then you said can you still hear me.

MM Yes. So, my work starts with talking to women, trying to understand, because women are not passive, agents in a patriarchal context. So, while they have restrictive social norms that they must appear to follow, they've figured out their own mechanisms to circumnavigate these norms, to get access to the kind of things they need to access. And so my goal, as a researcher, a technology researcher, in Pakistan, one of the bigger goals, is to look at how technologies can amplify the way they already navigate the existing social norms.

And in that respect, one of the things that interests me is how are women finding jobs? How are low income, low literate women, who can't go on Google. They're not reading the newspaper. Their social circles are limited. They're not leaving the house. And yet they are finding jobs in factories. So, that's the first step. How are they navigating this? And can I help them get access, gain access to more opportunities.

00:05:28

Once they get to the factory, what does that work environment look like, given that in the Pakistani context, anything that's associated with sexual education is not part of our schooling. Women here do not talk about their bodies. So, the intimate body is something that's considered taboo. It's not something you ever talk about. In another earlier project, where we had looked at women's intimate health, we found that even for many of the women, even talking about their periods was something that was just not done within their homes.

It was something they were never told about. So, we interviewed and talked to women who had had children. And they still didn't know about their own anatomy. And so in a context where the intimate body or the self is so taboo and it is so tightly and intricately linked with male honour. So, the entire honour and the respect of a man is largely dependent on how protected his daughter, his wife, his mother is. How exposed their bodies are. Who has access to those bodies?

And so when women go into factories, we wanted to understand the kind of violence they experience there, or the shape and form it takes. So, it's not just physical violence, and it's not just sexual violence, microaggression, or harassment. We wanted to understand the full spectrum of the kind of aggressions that they face, and their existing mechanisms for navigating that. But then also how can we design, and what can we design, that will help them form collectives.

00:07:07

So, if there are certain factory spaces, because women don't have these social circles. There's no Reddit. There's no Yelp that tells them that this particular factory is very male dominated. And has a culture that is very, very abusive towards women, younger women, entering the workforce. And so how this intergenerational knowledge that women have of which spaces are safe, and how do you navigate those spaces. How do you preserve that? How do you archive that?

How do you make sure women, who are just entering the labour force have access to that. And is there a way to allow women to share their narratives, to share their stories. Women's narratives in our context are invisible. They are excluded, and they are not heard. And so is there a way to bring their narratives front and centre. And does that help them connect with other women who have similar narratives.

And does that connection lead to more mechanisms for circumnavigating this. So, for example one of the things that we found that was really interesting was that not only is it just the workplace, it's also on the way to work, and on the way back from work. So, they're using public transport. And they're getting harassed on the way there. And they're getting harassed on the way back.

And so one of our younger participants said that the way I avoid that is I wait near the factory until more women come out. And I will get in the same rickshaw as other older women. And that being in that group protects me from being harassed, because I am with older women. And so these are the kind of insights that we were looking to generate to better understand what design might look like.

00:08:45

DM Okay, very nice. So, then what about you continue. And what then did you do?

MM So, then we started with interviewing. I work with me and my collaborator. So, I'm a technologist. I'm a computer scientist. My colleague and collaborator, Hadia Majid, she's an economist. And so she looks at women's labour party [unclear]. And so she has a better understanding of the economics, the labour markets, how women access labour markets, a better understanding of their unpaid care work, and how that correlates with their actual paid labour.

And so together we started with, and we always work with, community organisations. Because if you want to get to women, and you want to ask them... These things are intimate for women. And so they are not going to be sharing their experiences of being touched or violated, if they don't know you. There's no trust there. And that trust takes years to build up within communities. So, we typically approach community organisations. And we work with them.

And we leverage the trust that they have with these communities, to interview women and to talk to them. And so we worked with Akhuwat [?], which is a microfinance organisation. It's one of the largest MFI organisations in South Asia. And they have offices, and site offices, in lots of little cities. And they have site offices in lots of impoverished neighbourhoods in Lahore, which is the main

city in Punjab.

00:10:19

So, we work with them. And they give us access to their site offices, which are in neighbourhoods. And so we collaborated with the site managers off these offices. And they gave us these rooms in their offices, because we can't really interview these women in their places of work, or at home, because those are not often safe spaces for them. Those are not places they can openly, freely share their experiences with us. These are experiences they don't share with their family members.

And so we through Akhuwat, we set up interviews with them in these safe spaces. We tried to ensure that there was comfortable seating, that the space was comfortable. We tried to make sure there was no male presence in that area. And we tried to accommodate. So, one of the things with women in our context is their time. I think this is true for women everywhere, but particularly for women in our context is that they're time-poor.

And so we have to be very, very respectful and cognisant of that. All the women that we interviewed were reimbursed. They were paid for the time that they took out to chat with us. And we scheduled the interviews around either work, or them picking up their children from school, and dropping their kids to school. So the interviews were scheduled around their other duties. And we chatted with them. We asked them the kind of... Directly asking them didn't really get us anywhere.

00:11:45

But just asking them to talk to us about their daily routine and talking to us about some of their challenges. Even before talking about what happens in a factory, or in a workplace, talking about, well, tell us the process of getting out of the house. And so often times that's a negotiation even of itself. So, it's not just today they decided to go to work, they got up, they found a job, and they went to work.

So, just that is a fairly complex [unclear] negotiation between... For example one of the participants talked about how she needed to work because finances were... They were having financial problems, and her husband wasn't sure. So, he got some of the neighbourhood men involved. And then he got some male relatives involved. And there was this entire conference that was had in her house, about whether she should work or not, where she work, how she would get to work, who should go with her.

And that's the kind of negotiation that led to her working, but only on the condition that she worked in a factory, where her male cousin was already working. And so there's a lot of negotiation. There's a lot of stuff that happens before they even step outside the house. And then they told us about commuting to work, coming back from work, how they were navigating that. And often we try to go with other women in the same neighbourhood, who are going in the same general direction, on the way back.

We try to get into a chingchi, or a rickshaw, where other women are already in. Often we've had women tell us that well I was... And there's no age limit to this. We've had older women say I was harassed. And then I told the person who was

harassing me, I'm as old as your mother. Like what are you going to get from me? And so this constant harassment on the way to work, or on the way back from work. And then similar situations in factories, women are being fairly reluctant to actually share with us the kind of experiences they've had within factories.

00:13:50

And I think part of is just a fear perhaps of this getting back to their employers. Most often they're finding jobs through very limited social network. So, if a neighbour's daughter, or wife, is going to a factory, and she'll say, well, there's an opening in my factory, why don't you come apply. Most often though it is through male members, and so it is male members determining where these women will work. They'll come and say, okay, in my factory there's an opening, and I'm comfortable you working here.

But they don't have access to any kind of archive knowledge, or any kind of collective, where they can have conversations about this is what I want to do. There's also little conversation around how much they should be paid. And so because the women are not socially connected, because they don't know what everybody else is getting paid, it's almost impossible for them to negotiate pay.

And so the second thing that we did after our initial interviews was to do... We've done three, I think, participatory design workshops. Because some of the narratives and some of the stories that we were getting weren't, especially in terms of the environment within the workspace, they weren't detailed enough. Often women would say yes that I'm feeling uncomfortable, or my supervisor is behaving in ways that I think are inappropriate.

00:15:15

But what am I supposed to do, like I can't go to the police. Like the minute I talk about it, it becomes a thing. And right now it's not a thing. So, how do I convince the male members in my family that it's not something that I did? And so if I tell them, what if they say you can't leave the house now. You can't work. And so there are just many, many layers of challenges before they could even talk about what they've experienced, and how it impacts them.

So, then we did participatory design workshops. Initially we went in with the phone is an artefact and asking them well, if you wanted to report a narrative [?] what would it look like. But we weren't getting the kind of response we wanted. And then we came back after the first participatory design workshop. Within the first one, we just had images. And we had a video. And so we had images of women travelling. And we asked them, like when you look at this image of a woman in a rickshaw, how do you feel, what does that mean for you.

And then we had images of women on a factory floor. And what is that, like how was that. And then we had women within their homes, with their families. We had women talking to older women, mother-in-law type women. And we asked them what they were feeling, or what they thought about, when they saw that image. And then we had also a video in there about, it was a very short video, in a local context that showed a younger woman working on a factory floor.

00:16:41

And then her older boss coming to tell her how to stitch the cloth, but getting very inappropriately close, and inappropriately touching her. And she's trying to move away. And he's not giving her the space to move away. And then later on, calling her into his office, and again trying to get physically close to her, touching her person. And we asked the women what they thought about this. And at that point, we started to get, well, yes, I've seen that. Yes, that's happened. Yes, I would recommend that she just not ever be alone in a room with him.

And some of the women said, well, yes, I think she needs to start screaming and make a fuss. And then some of the women said, well, if she makes a fuss she's going to lose her job. And we don't know what her household situation is like. And we don't really know if she's then not going to be allowed to leave the house. So, the video we thought was quite successful. But the images didn't really help us get to understanding, or help women, think about help to reveal the mechanisms that they're using to navigate these challenges.

And so then we came back and we said, okay, how about we make it more interactive. And that's a challenge because most of our participants cannot read, and they cannot write. So, traditional PD methodology rely on some kind of writing something on a sticky note and putting it up on a board, and reading what other people are doing. And so it is really text heavy in that sense. And that's not something that's useful for our context and our participants.

00:18:10

And so what we did was we designed a game. We said, okay, let's make a game. And let's see if we can get these women to play. And based on the qualitative interviews that we had done, we made three different types of cards. We made activity cards. We made goal cards. So, when we were doing the interviews, one of the things that we'd also ask these women were their aspirations.

So, the idea of being to let's think about designing for aspirations and not for needs. And see if that makes it a more useful and more meaningful tech for our participants. And so we asked them what their aspirations were. And we took those aspirations, and we turned them into goal cards. And we took the challenges that we had identified from the qualitative interviews, and we turned them into these barrier cards.

And then we took activities that the women had said that they had done to get around some of these. And we turned them into activity cards. So, we had green cards, which were your activity cards. We had red cards, which were... I think the green cards were the goal cards. That's what you want to get to. The yellow cards were your activity cards. And the red coloured cards were your barrier cards. And we had images on each of them.

So, we didn't use text. For each of these cards we used images where a man inappropriately touching a woman might be a barrier. We had an image perhaps of a mother in law, and that might be a barrier. We had an image of a very aggressive looking man, and that could be a barrier, in terms of your husband not allowing you to work. And so we tried to visualise and use images to help

women understand what each card meant.

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And we went back into the field and we said, okay, I want you to pick a goal as an aspiration, one goal that speaks the most to you. And here are the barrier cards. And here are the activity cards. And I want you to pick your current starting position from where you are. And this is your aspiration, your goal card. And can you use a mixture of these cards to get from here to your goal. And can you tell us about what that journey is like. What kind of barriers, conflicts, do you think might be faced? And how do you think, what kind of activities might help you get around those barriers.

And that was actually, I think, really revealing, in terms of the kinds of like women got really involved in that. And they caught on really quickly, because it was very visual and it was very tangible. And so it was like playing cards. And they were size of playing cards as well. And so they started making these pathways with specific activities, and specific aspirations. So, if I want to get to work, or if I want to search for a job, or if I want to have enough money to build a house, what kind of things would I be doing, and how would I be overcoming my barriers.

So, that's where we are now. We've done two of the participatory design workshops with these cards. But then COVID hit Pakistan, we got our third wave. And so we've been doing all of this work in the lulls [?], in the valleys, where COVID the numbers start to go down a little bit. And the restrictions ease. And then we are very quickly mobilised in going to the field. And especially because with participatory design workshops, we'll do this with groups of women, we're not doing this with individual women.

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So, the women can look at each other's pathways as well. And we can capture that conversation around, oh, interesting, so that's an aspiration. And, oh, that's the activity you picked. And so we could capture some of that communal understanding perhaps of how women perceive these different pathways. But, again, having five to six women, plus two of our researchers, in the same room during COVID, has been a challenge.

DM When you put them together, are these the same offices of the same NGO, at the same formula as for your individual meetings?

MM We tried to pick sites that have a garden, or an outside space, so that we can all sit outside and have these conversations, just because it's safer with COVID precautions. But very often, these are very, very small offices that have perhaps just one office that they can give us but there's no outside space.

DM Okay, wow, marvellous. Very interesting. I had read about your cards in your report, but nothing like this. So, that's really nice to hear. Okay, so thank you very much. That was very nice to hear as a whole. So, now I'll come back to some of the stuff you've said, and some themes that I might ask you to elaborate on.

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So, the first one is in your own professional journey, and maybe personal journey, where does that project fit? What informs? You said I have done other projects before. So, where does that fit in your own professional and personal journey, that project in particular?

MM So, I am a Muslim woman who was raised in Pakistan. I grew up in Pakistan. But I was privileged to have gone to great schools, and to have then gone to the US for my Masters, and then spent the next decade in Germany, working and getting my PhD and doing research. And when I moved back, I was still working in tech. But I wasn't really looking at it from a very gendered perspective. And yet there are specific barriers that I face, as a woman in Pakistan, to the way technologies that I [unclear] work for me.

So, just to give you an example, when I first moved back, even though this is my hometown, I hadn't lived here for 15 years. And so I didn't really know the ways. And a lot of the city has changed. And so I was relying predominantly on Google maps to get around. But very, very often the value underlying Google maps is not one of safety. It is one of efficiency. Google maps is very secular in nature. And the goal is to get you from A to B, as efficiently as possible.

The goal is not to get me from A to B as a woman, in a context like Pakistan, safely from A to B. And so very often if I was coming home late from work, and it was dark, I found myself in really deserted areas. There was no lighting. There were no shops. There were no residential areas. And it really, really would terrify me. And I think that realisation of now being embedded in an environment that was physically not safe for me, where existing in a public space was not safe for me.

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But then none of the tech that I had relied on in Germany, or in the US, was working for me anymore. And so that's where we're starting to think about, and looking at, well, how should this be done. It's not too much of a stretch actually to consider that Google maps would have the information of which roads... If you can tell me the traffic, it can certainly correlate that with how well lighted a road is, how much pedestrian traffic there is, if shops are open. And tell me, okay, this is probably a safer route. It might take ten minutes more.

But given that it is late at night, Google maps know what time of day it is. It knows I'm in Pakistan. And it knows I'm a woman. So, it's not that much of a stretch for it to tell me that, okay, it's 8PM, it's fairly late. And perhaps not rely on the most efficient route. Perhaps take this route, which might be ten minutes more. But it's through crowded streets, and well lit streets, and lots of pedestrian traffic. And so there are certainly ways that technology can do this.

I think part of it is just that that information isn't there. That context isn't there. The idea that this is a very diverse context, where users have very diverse needs, where users have very diverse aspirations, it just does not exist in the way designers, and most of our technology is imported. In fact all of it is imported. We use Facebook and WhatsApp, and we use Google maps. And we use Google Scholar. And we use YouTube. And none of that was designed for our context. None of that understands our context.

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And so that's how my work started. And when I started looking at the context, and I started looking at vulnerable populations within this context, women have very unique needs. And they have very unique aspirations. And the burdens and the care that they carry are also very, very unique. And tech just isn't designed for it. And so I think in many ways technologies further marginalise women. Because now there's another thing that men have access to, and they have opportunities, because they have access to that.

And so because they are now very visible on the digital space, and women are again invisible on the digital space, now you are further marginalising them. You are further amplifying that gap. And so how can better tech be designed for them, how can you change existing methods. How can you incorporate new frameworks? For example, we talk about digital financial services. And the Bill & Melinda Gates Foundation, they're throwing a lot of money at trying to get women to open bank accounts, to be financially included.

And one way they've decided to do that is to use mobile wallets, and to use digital financial services. But then the way it's implemented is that you take how digital financial services, how mobile wallets, operate in other parts of the world. And then you try and bring that here. But you don't think about the use cases where it's useful for women, for women of this country in this context, with the aspirations that they do have.

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And so what you'll do is, for example one of the women that we talked to she was very aware of these. She knew what these mobile wallets were. But she was like how am I going to use this. What does this do for me? And how is this different from a bank. It's like giving it money and taking it out the next day, because I'm not rich enough to leave it in there and forget about it. Like, how is this supporting my aspirations and things I want to do. And how is this any different from a bank account.

And so from there where they were struggling, so there were finances. And there's privacy. That's another area I work in. Like, how women in Pakistan do not think of, or see, privacy as an individual right. So, for them it's not an individual right. We've had women tell us that why would I need privacy. I don't need privacy. I've nothing to hide. I've done nothing wrong. But then they'll try and delete WhatsApp chats. But WhatsApp is not designed for that invisible privacy.

So, when you delete a WhatsApp chat, it leaves a message there that says this chat was deleted. And so even within that there's little understanding of the privacy needs for women in this context. And that's also true for how they find jobs. There are so many, when the Me Too Movement started. And there was this broader push towards women being able to share their narratives of abuse, not being afraid, and finding the support to speak their truth. How does that translate to women I work with.

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There's no way that they're going to go on Twitter or Instagram and say #Me Too and then talk about their narrative and the kind of extreme violence that's been, intergenerational violence, that they've experienced. And so most of the world can't even imagine not being able to just decide you want to work, having male members of your family need to get together to allow you to then go and work. That's not being documented. That's not being understood in the way it should be in how we design tech.

So, that's my personal journey, and how so many of my projects are linked, it started with just talking to women. And then realising okay so financial systems are not designed for them, privacy systems are not designed for them, social systems are not designed for them. So, for example, we talked to... One of the ways women in Pakistan are trying to reclaim the digital space is to create close Facebook groups, to create this safe space, digital safe spaces for themselves, by creating these closed groups where only women are allowed.

These are non-judgemental spaces. Women can come in and share their narratives. But now they're faced with not all women.... So, women are part of the patriarchal system. They are part of the players and the stakeholders that uphold that system. And so women are not comfortable in sharing these narratives with other women as well. Because they don't know if somebody's going to take a picture, and share it with their families, with their husband, with their relatives.

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And so then moderators what they started doing was creating DMs in their private chats. So, if I wanted to post my story, I would write that story down as a private message to the moderator of the group. The moderator will [inaudible] creation of safe spaces, it just doesn't. And so women have to figure out these roundabout ways to do it. And so that's been my personal journey intertwined a little bit with how I got to working on gender in general, and then this particular project specifically.

DM

Thank you so very much. Sometimes, Doctor Mustafa, the connection has been interrupted. But then what's happened is, maybe you know that better than I do, is that when it came back audio, it started where you had left. So, I don't feel like I've lost anything. But anyway so but if I do I'll tell you before. And if I do at one point stop my video, it's just to help the connection. So, don't worry, I'm still there. If I'm not there anyway we'll find a way. So, that's marvellous.

So, go back again, so you spoke about your own journey. What about your professional journey? So, I'm going to say a little more. So, you're training but how did you design these series of projects? Can you tell a professional story like, okay, I arrived back from Germany? I was doing this, and then I was doing this project. And out of this project, this project. And these disciplines, and this, like can you do it a bit...? Now that you've done the personal one, which is really interesting, can you do it again, or add some professional stuff to it?

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MM

Yes. So, I came back from Germany. And I joined a new university that I'd been up for a couple of years, four or five years. And that's where I started the ICT for

the information, communication technologies for development. I started the course there. I taught students there how to do qualitative research. And then there was a grant that was granted to that university by the Bill & Melinda Gates Foundation through [unclear] to work on designing digital financial services for women.

And because my training basically is in human computer interaction, I'm an HCI researcher. They came to me to be a consultant on that grant. And that was the first project, the gendered project that I did in Pakistan. And from that project then we got a second grant with researchers at the University of Michigan, the PI for that is [unclear] University of Michigan. That was designed to look at maternal health and designing for maternal health in Pakistan.

And so that grant allowed me to go back into the field, to talk to women around their maternal health needs. And that helped me understand how women look at their own intimate health. And so one of the conferences that I go to every year, or try to go to every year, is the CHI Conference, and in HCI it is one of the conferences, the big ones. And over there, I met researchers who were in Bangladesh and Malaysia, who were also working on women's intimate health.

And we decided to look at religion, Islam, as a religious value as determining how you, not just behave with tech, but how you engage with your own health and tech. So, what are you willing to search for, and how are you willing to search for it. So, that was the next project that we took on. And that was a three-country project, with researchers in Malaysia and in Bangladesh.

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And from there, we went onto apply for this grant, which because Doctor Hadia, and I, who's the economist at LUMS, we'd been talking and having these conversations about most of my work is interdisciplinary. And so I work with anthropologists, and I work with economists, to better understand how societies work, how individuals work, within those societies. How women navigate their labour market. And what their histories are that determine some of their behaviours in the present.

And so Doctor Hadia, and I, have been talking for a while about actually... And her expertise actually is in the labour market. And so she looks at women's work exclusively. And we wanted to work at that intersection of women's labour market, labour force, and the tech that exists or doesn't exist. And then the kind of support they might need once they're at the workplace. And so that's where this evolved from.

And once we started talking to women, the lens became broader, because it went from looking at the workplace, to looking at the negotiations that happens at home. And then it went even further back and said, well, hang on, how are they even finding these jobs. And so when we started this, when Hadia and I started talking about this, we weren't really... It had not occurred to us actually how are they finding jobs. That was not a question.

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The question was that given my previous work, and her work with labour

markets, and my work with women's bodies tells us that this is a very taboo space. And so how does this operate in a workplace. How do their bodies operate in a workplace? And what happens when they're in that place. And so that was the narrow focus that we had. And then when this call came in that fit in really nicely with what we were thinking of doing. But then as we've talked to women, the lens has gone out more and more for us.

DM Great. So, that's nice to hear. So, that project gave you the opportunity to broaden your lens a little. And then as you did that project you broadened this even more. Do I hear that right? And if I hear you right as well, part of what was possible is because in your own university, there are opportunities to work, and that is a place which allowed you to work with this economist in particular, and these anthropologists, in particular. So, there the university was doing its job, allowing people of different disciplines to meet, and imagine things that they wouldn't imagine otherwise.

MM So, I switched universities after a year. So, this is not the university I started in. I came to Pakistan and I worked for that university for a year. And then I was recruited by this university. It is one of the best universities in the country. It is also where I'd done my undergraduate from. And so this is a much bigger university. And so you have a dedicated department, you have a dedicated anthropology department. You have a dedicated keeping track [?] of gender studies.

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And so that allowed... One of the reasons for the move was because now I had access to human resources. Like a faculty who did this kind of research that intersected so nicely with what I was wanting to do, and what I had started to do, and the way I wanted to look at tech. And so that environment allowed me then to reach out to anthropologists, and religious studies experts, and economists, and experts on women's bodies, and experts in health.

DM And did you move your centre, like the centre you created there, did it remain to the old university, or you moved with your centre?

MM Yes, I moved. So, I teach this course now, this ICT for development course now at LUMS. And the goal for this course is actually to train computer scientists. Because even in the current department the way that the computer science department works it's very traditional in many ways, in that we're still not seeing the kind of merging of disciplines within the department that I found so exciting at Cornell.

And in Germany it was a very open approach. It wasn't that if you were doing computer science then maybe you should only be coding or programming, or doing operating systems, like one specific space in it. And so that's what I've been trying to do that I design the information communication technologies for development course here. I reworked it. And that's the course I teach. And the goal is to have students think about technology situated within contexts, within people, within communities.

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So, it's not just them as designers sitting in a basement somewhere, cranking out the tech. But as also anthropologists and as people who are like these are machines. And this is tech that's going to be used for people. And so if you're designing for the Pakistani context, or you're designing for the Bangladeshi context, I don't care what the context is. But you need to be thinking about who am I designing for. What is it doing for them?

And we teach them how to do interviews and how to gather qualitative data. So, they do a project where they have to actually do the entire life cycle, where they go, they talk to people. They record that data. They get consent. They have to get an IRB. And then they have to make sense of that data. So, it's great that you have qualitative data. But what does that tell you about design. How does that translate to what you might think of creating for these people?

DM Cornell, Germany, were these departments of human computer interaction. When you said what's so great about these departments, yes?

MM Yes, so with Cornell, I was with the Information Science Department, which is where the HCI faculty was housed. And that's where I was able to... And at Cornell, I was actually able to take psychology courses. As a computer scientist, I was able to dissect brains, and understand how the brain actually what the physical structure looked like. And that understanding of how we perceive things, how we see things, what we see, and what we don't see in our peripheral vision. What happens in our blind spot?

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That really impacts how I think about technology fitting in with human capabilities. And in Germany, I was actually with the computer graphics department. And I was lucky to have a professor who wanted me, even though graphics was not my area of research. But he really wanted me to come and work with him. And we worked together to create [unclear] that interested him but then interested me as well.

So, they were more looking at can you quantify emotions. Can you use electrodes, and measure brain activity, to quantify how you feel when you're looking at a computer generated virtual human. Is there a difference, and can your brain tell when you're looking at a really, realistic rendering off a virtual human versus a real human. So, things like that.

DM Is it time for you to stop for your daughter?

MM Yes, would it be okay to pause this for five minutes?

DM Or even ten. Do you want to come back in ten minutes? Would that be easier?

MM Ten minutes would be great.

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DM Okay, so ten minutes from now. So, it's going to be whatever 30 it is. Let's see, half past.

MM Okay.

DM Okay, take good care then, bye.

00:43:05

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Speaker Key:

DM Dr. Dominique Marshall

MM Dr. Maryam Mustafa

00:00:00

DM Okay so welcome back, Dr. Mustafa. So, we were talking about your professional and personal trajectory and how that intersected with this project and I just want you now to talk a little on something else which is how you think about the community in which you're working. You said it's the city, then you said I'm going in the valleys where it's safer and then you said Pakistan. So how do you think about the community in which you're working in?

MM So I think when I said valleys, it wasn't clear. What I meant was valleys of COVID, right? You have the COVID peaks and then you have the COVID valleys where the numbers go down and then we can go out into the field again.

DM Into the valley.

MM And because there's a COVID peak, yes, we're in a peak, right? That's how we've had to do this fieldwork and research. I think my perspective about the communities I work with has changed. That's been an evolution in and of itself because I think that just because I grew up in Pakistan, does not mean I understand the context. It does not mean I understand the challenges of the communities I work with or their aspirations.

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And I think when I started, I came at it from a very tech-utopian space where these were vulnerable communities and I could design something for them. Almost like a saviour complex where I could just go in and say I'm going to design something and this is going to help you.

And then over time in talking to these communities and co-designing with them and working with them, you start to understand that they're very empowered in their own way and that empowerment does not take one particular shape or form. And that the literature that I had read on empowerment was coming very predominantly from a very western perspective where agency was looked at in very specific ways. And the agency I was seeing with these communities and with these women didn't look the same. They were still exerting their agency, they were just doing it in different ways.

And they were very, very aware of the choice available to them. There were very aware of the choices available to them and there was a very conscious decision being made about which choices worked best for their context and for their constraints.

And so now the approach that I take is more let's work together and design together. And it's not so much as a top-down approach where I'm designing for you and this will solve your problem. This is how can I help you amplify what you are already doing because you already got this figured out, right? How do I help you get to that aspiration or how do I help you amplify the things that you're already working on.

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And I think that there is a great deal of diversity. That's the other thing I've come to understand is just because I've spoken to women in one city or in one neighbourhood, does not mean I can generalise everything to another city, so city to city.

For this project, we looked at Lahore and we've gone to Faisalabad which is about three, four hours from Lahore and it's less urban. I wouldn't say it was rural but it's just a smaller city and it is less developed and I would imagine less literate. And it is predominately where cloth factories are and where cloth is made. And so women there have a very different set of challenges than women here. Their access to stuff is more limited.

But in some ways, they are also more, they have, and we're still digging through the data so this is just based on the initial transcripts I've seen in the interviews I've heard, they're more blunt about their challenges. They're more blunt about their experiences so there's less inhibition about keeping face or saying it's all good, the factory is great. So there's just more yes, this happened and this happened and this happened. And this is how it is. And what are you going to do about it?

DM

Okay, good. Very nice, thank you for that. And you've already spoken about the language that's there's a whole reflection there about how do you address these people and all the adaptation you've made from more usual participatory design techniques to ones that are adapted to people who do not write and read. What about the actual language? Do you speak English? Do you speak other languages? So what do you speak?

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MM

Yes so when we put together this team, there were a couple of things that we were looking at. We were looking at women. We were hiring only women. And so that was another thing that I fit in really well when we looked at the call for this grant, because with our work, we typically hire women. We are a women-led team. Hadia is a woman, I'm a woman. The [unclear] hire women and we work with women.

And so we were looking to hire women but we were also looking to hire young students, young women who could speak the local languages fluently, so who could speak Punjabi and Urdu. So Urdu is still a more elite language so it's still the language of the educated in Pakistan. Everybody else speaks Punjabi and so

we made sure that we hired, the team members that we took on, understood and spoke fluent Punjabi.

And then when we created the interview, semi-structured interview protocol, we created that in English, and we translated that to Urdu and we translated that to Punjabi. And then we took it to some of the people that we knew, that we were friends with or that we knew who spoke colloquial Punjabi. And we sat down and we worked through it with them because there is academic Punjabi. It's very formal and so they colloquialised it for us. And so the terms that they put in the way they addressed certain things were more colloquial so it wasn't just Punjabi, it was colloquial Punjabi. And so that's how we navigated the language.

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DM So as you were doing this since you've thought about that a lot, did you just in these questions of vocabulary, did you discover things about technology and gender just because of how people named these things?

MM It's interesting that you asked that. It's less about how people named these things, more about even when we were talking to our community person who was helping us colloquialise, there is no word for harassment, right? There's no Punjabi word for harassment. There is no term that encapsulates that violence or that inappropriateness, right? Or even rape, right? Or violation of your body where you're feeling uncomfortable.

We have those terms in English so where we have put in harassment, it was really hard for them to translate that in a way that made sense. So there are certain words that just don't exist in terms of the violence that are meted up to women in our context because it's. And I think it's intentional, right? It's made to be invisible. You don't want to talk about it and so you don't create a language for it.

DM Do some people in your university write about these things?

MM Yes so we have a doctorate and the doc gets money who's an anthropologist and she also leads the gender studies programme and so a lot of her work has looked at these terminologies.

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So for example, some of the curse words that are used for women often have to do with mobility, with the Urdu word for mobility, right? So [non-English] means to stroll around and then the curse word for that is [non-English], right? And so some of those words are actually linked to women's mobility and presence in public spaces. And then turning that into, just because you're in a public space, you must be a whore or you're a woman of questionable morals. And so yes.

DM Very interesting. I'm going off there, this has not been my thing. So back to other thing now, this part of it, more about interdisciplinarity or how you navigate different disciplines. So you've already made a lot that explicit. You are working on this project mainly with an economist. You've included anthropology. You include all these methods in your teaching. You learn many different disciplines in departments where you were, which looked like they were putting psychology and anthropology into what they were doing.

So if we're thinking just about this project, so you conceived of it because of conversations with an economist. If I understand well, you brought anthropologists and then your discipline is you say technology or human computer...

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MM Computer interaction, yes.

DM So think about this project, how you conceived of the disciplines and how along the way you might have added, changed, enriched your idea of interdisciplinarity working.

MM So I think that for this particular project we didn't bring on an anthropologist but we've drawn a lot of the methods from anthropology. And some of the student researchers that we've taken on have been from the anthropology department. So they have brought in that perspective of being able to understand the physical city spaces and how that functions and how that impacts gender.

In terms of our thinking about interdisciplinarity for this project, I think one of the things that's really added value is both of the project managers that we've brought on, their background was in social work. And so we brought them on as project managers but they've ended up being researchers in this as well because they come from a, their political acts and they're explorers so they have worked with women on gender-related issues, feminist issues, empowerment issues. And they are social workers, right? So they run in their own time, they run discussion circles and they have these.

And so they both, the first one was with us for a year and then she went off to the US for a master's programme and now we hired another one and her background is also social work. And she's brought in a real depth of information and her own perspective on the data that we're looking at and how to talk to these women.

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DM Very interesting. I work with social workers. I do and it's a bit serendipitous how it happened but like you, the more I do this, the more I learn ways of doing community work so it was a funding story which ended up being a method story. So that was very nice. Okay, good, very interesting.

Okay, so next thing now. You've talked a lot about notions of gender so I can have you talk freely about how your ideas about gender have changed or have they or have applied for that year and a half so far, for two years, and please do so. But in it, I'm thinking back of what you said, gender has social construction of sex and so you're putting men in your reflections. So you were talking about how men's notions of honour determine how the women decide when and how they go out.

So in a way, and then you talked about empowerment and false ideas of empowerment you had before, misleading ideas of empowerment. So if you put the men back in your story, how do you think of men in all this? Because it's also their own responsibility, right? So they think that they're responsible for this. So for them, it's also a burden or something heavy too. Can you talk to me more? I

like what you said, I just wanted you to talk more about this.

MM So I think that more and more over the course of the year and a half, this project and another project we're beginning to understand. Because it's a very astute observation actually that we when we talk about often about gender and when we talk about patriarchy in a context like Pakistan, the focus is on women. And men as the other, right? So they are other in that conversation.

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But patriarchy impacts them just as much and there is certain violence that they experience as well. And that violence is in the name of masculinity, right, which determines the kind of responsibilities they have to take on, the kind of roles that they must perform. And the kind of ways that they need to exist to be a man, to perform as a man. And that impacts them just as much and perhaps a lot of the restrictions that are then placed on their female relatives are the result of that expectation of masculinity which they're then performing. And so absolutely, I think that that is absolutely part of it.

We have not actually spoken to male participants. That is something that we're looking to do for a follow-up project that we're thinking about where we actually want to explore.

And interestingly, Dr. Hadia and I were just discussing this this morning when we were looking to write for another grant. And one of the things that we really want to explore is as we now begin to understand the kind of violence that women face in the workplace, I would imagine that the shape and form this takes for men is very different.

It might not be physical violence, it might not be related to their bodies, but I can imagine that they're experiencing violence as well at the workplace. But I have very little understanding of what that might look like and how they're processing that, and how that trauma is impacting who they are. And so that's something that we're looking to do actually as a follow-up.

00:14:57

DM Very nice. Okay so now open it up a little more. Any other general or remarks on how your idea about gender and technology changed or deepened from when you conceived of this project to now?

MM So I think it's a little bit pessimistic and I'm not sure how helpful this is going to be to you but I think that over the year and a half for this particular problem I'm not entirely convinced technology is the solution. I really don't think that you could design anything that could change, that could bring about that attitude shift, right? Because that's what you're really looking at.

So you're looking at fundamentally changing the way societies look at women and their bodies and their presence in public places. And I'm not sure there's any tech, no matter how well-designed that's able to do that. And so perhaps the goal then is to not completely give up on tech but then perhaps see if there's a smaller step that you can do that will maybe get you to that bigger step.

DM All right so where have your illusions fallen? Where is it that you think you

thought it could and it can't? Where is it that it's?

MM Well, because I think that so much of just the access constraints, right? Just the fact that even if I was to design something like the best system that allowed them to socially connect with other members, other women working in factories, I'm not convinced that they would actually be able to freely use the tech to actually do that.

00:16:51

And if they did, I am now more cautious about the risk they might be exposed to if they did that. And so it's like if the male members, if their mothers-in-law, dominant members in that household were aware of those social connections and were aware of the conversations or the narratives that were being shared in that space, then what are the repercussions and what are the consequences for that? And then is it worth it?

As an academic exercise, it's great for me to think about what that ideal design might be. But in terms of real-world impact, I'm very, very aware of the consequences of something like this.

DM Very nice. Okay, another one. When we talked about gender, we also talked about, you used that word, intergenerational so as you talked about older women, younger women, and then women raising girls. So in all these projects, and you said harassment is happening to older women, younger women go with older women in the rickshaw. Any other considerations about your project and generations?

MM Yes, so one of the themes that keep coming up is that mothers are actually hesitant to give their daughters devices as well. Because they don't want that impression of their daughter being out, that their daughter uses a phone, and then why is she using a phone, who is she talking to?

00:18:30

But [inaudible] big aspirations for their daughter study, to have an education, and to not be working at a factory. So that's their aspiration, right? So if I can put up with this, and if I can earn enough to make sure my daughter is educated, maybe she can have her own business. Maybe she can work in an office. Maybe [inaudible] the next generation is not working at a factory.

DM And as they dream about this, it's as if a dream where the barriers, whatever they are, might be lesser, is that what I understand?

MM Yes, I think the sense I'm getting is that if their daughters are educated, maybe they'll figure out a way to get over those barriers. Maybe there will be different barriers. They won't be the same barriers just because they're educated.

DM Okay other theme altogether, you did some participatory design so you did some making stuff. Can you talk about the role of that part in your project? Making in your project. You've already said a lot, you've talked about how you adapted and adapted your ways of making until you thought you were going or you wanted to go. Have you got any other comments on the role of making in all this? Because this is another way of doing research or an additional way so please talk about

this a bit.

00:20:16

MM Our aspiration actually when we went into it was what if we had building blocks and we had streets and we asked women to create either a factory floor or to create a street. Or create what their public spaces might look like that's their vision of where they want to be.

But again, women in our context, the women we were interviewing were very time poor and particularly participatory design workshops would go on for two, three hours. They gave us an hour and so in an hour, what can you really make? And so they were just creating and making pathways to their goals.

And because it was tangible and visual, they enjoyed doing that but I think it also served more as a way for these women who didn't know each other before to bond and they said well, can we just chat now? And that's when they didn't want to do the activity anymore. The activity had been like an ice breaker for them in getting them to sit down and just talk about these issues. Because I think they were also seeing that the pathways that the other women were making were very similar to their own and so that facilitated a conversation.

DM And if I understand you well, this is something you seem to be saying, I just want to make it more explicit, it's easier for them to speak about another person. So she should go there, she should go there, and not them. That really frees the conversation.

MM So that's what happened when we showed them a video of somebody else getting harassed in a factory. So that's when they were okay, yes, I've seen that happen, yes, I know this is happening to her. I recognise this. And they could even predict, even before he did something, they could predict what he was going to do because all the signs were there. They noticed this, they just can't talk about it in relation to their own body. And so yes, even with the activity they were seeing what other women were doing, and then that facilitated that conversation.

00:22:25

DM So who did that video? You may have written that in your report and I didn't get that.

MM Yes, so [inaudible] this was a, because we wanted the video to be. Yes, so I'm back. It freezes.

DM No. It's me, I've just blocked my...

MM So I think that that video...

DM Go on.

MM Yes, so when we started looking for artefacts to use to start conversations, we wanted in terms of the video, we wanted a video that showed a factory floor that they had seen. That showed not a white person but a man or a situation, all the actors that they recognised. These were people that they went to the factory with. These looked like their supervisors.

00:23:23

And so we took this from YouTube I think a larger movie or something that was based on this context of local actors. And that's the snippet that we used because it had the most, the girl was dressed in a shalwar kameez, the local dress. And the male actor was, his physical features were very similar to what they're used to seeing and so that's the video that we used.

DM And the methods of participatory design that you used, did you bring them back from Cornell or Germany or readings? Where are they coming from?

MM So as I said, most of my work is in human-computer interaction and a lot of, a subset of that is participatory design. And so when I've gone to workshop, I've done conferences, and then Yoko was actually, I think Yoko was instrumental in helping us make that jump from the way we were doing it.

The first iteration that we did, we just had those images and the video. And we had just coincidentally I think a couple of days later, we had that conversation with Yoko scheduled. And Yoko is a PD expert, right? She's also now the chair of the participatory design conference and so that, when we were talking to her about some of the challenges that we were facing with how the participatory, the first one had worked out, and she said well how about thinking about it in non-textual terms?

Can you think about images? Can you think about doing it in a way that's tangible but doesn't really rely on them writing? And so a lot of actually the way we've evolved in our thinking about the project has come from Yoko.

So one of the first conversations with her, and this is when we were doing our interviews and she said, well, instead of thinking about your tech as the safe space, perhaps bring it all the way to now and the place where you're doing the interviews. That's a safe space as well. And so what does that need to look like?

Let me just see if switching my internet will help. Give me a minute, I might freeze out for a minute. I have another one. Let's see if this gets better.

00:25:47

But yes, I don't know if you caught that but even when we had started our interviews. And we had been talking to Yoko about our findings and she said maybe the final thing for you is not, there was a slight tunnel vision in that we were really, really focused on the tech and what that tech looked like. And she said no, forget about the tech for now. Maybe that's not your output. Maybe that's not what you get out of this, right?

So maybe think about where you're doing the interviews. Is that a safe space? How can you make that a safe space, right? How would you conceive the design of that as a safe space? What elements can you bring in, what elements can you change? And so her perspective on all of this has really in some ways scoped and shaped how we've gone about this.

DM That's very nice to know. Okay. The next bit I think you've already answered so maybe we can skip it but you've told me a lot about how you adapted with COVID and decided it was timing of your actions depending on the valleys of the

statistics. Is there anything else you want to say about COVID and your project?

00:26:55

MM Yes, COVID has really done a number on our project because we'd envisioned this as sitting in a room with lots of women, with our cups of tea and our local snacks, and just having a nice conversation about all of this, and then maybe building things together. But COVID means that we can't have more than five people in the same room at one time.

It means that intercity travel has been restricted, right? The government has just shut down the highway so we've only been able to do that one time and that's something that we've planned for the future. It means our participatory designed workshops have been very, very limited.

And then it has also meant that there have been periods of where we're just analysing data or we're looking at secondary data because even telephone conversations we cannot do with our population, right? We can't do Zoom calls with this population. We cannot have these conversations over the telephone. These are conversations you have face to face in a safe space with people you know you can trust who will take care of your data and will not have it get back to your families. And so that's really impacted the pace of the work I think.

DM Okay now a bit about the role of the programme. The meetings with Yoko, the meetings with Tracy, the labs that we did, Lab One and Lab Two, your expectations towards the forthcoming exhibit. Anything where you would like to comment about after you've or even when you prepared your grant? Your interaction with this programme and how does that fit with your project.

00:28:38

MM Yes, so as I said earlier, I think our most fruitful interactions were with Tracy and with Yoko. And I think one of the things that I found really, really helpful, and again, this is me being slightly blunt and very open. I think that as researchers based in the global south, there's often condescension and that comes when you are collaborating or interacting with researchers in the global north.

And so one of the things that Yoko said upfront was that I'm an expert in participatory design but I don't know your context so you guys are the experts. You've been working on this for years and you understand this better and I'm here only to help you in whatever you want help with. So it wasn't coming at it from a, I'm the expert and I'm here to tell you how to do your research.

And I think I found that really wonderful to be able to talk to Yoko in that collaborator way and not in a very, because we've had those experiences. Dr. Hadia had those and I've had those. And so I think that was really helpful.

And the fact that I'm not a participatory design expert but Yoko is, and that was super helpful. So she sent to us a couple of times she sent us related work, she sent us papers, she's pointed us towards these are the things that you need to be looking at. She's gone through our data with us and said okay, so this is how you can perhaps think of quantifying your participatory design. And she also said okay, she's looked at our qualitative interview protocols and said okay, they're really interesting but maybe you can also think about the interviews as design

and not just focus so narrowly on just the tech as design. And so that's been really phenomenal.

00:30:23

And she's pointed us to where we can publish. And agreed to help us, to be a co-author and help us collaboratively work through our paper. And so that interaction with Yoko has been just really, really rich and fruitful. And I think that's really added to not just for this project but my understanding of the work I do as a researcher.

I think Lab One was okay. I think that it was, parts of it were great, I just thought it was really long. And because it was evening time for us, and we do have, Dr Hadia has kids, I have kids, we have care work that needs to happen and so I think that perhaps that might've been a bit more aware of that.

The second lab was great. I don't think we attended that because we were in the middle of changing up our team. Some of them had left and so we just didn't have anybody who could attend. And I'm really, really excited. So one of the things in our last conversation with Yoko she said well, it'll be really interesting if they actually did a session on prototyping or participatory design because that's not expertise that I think some of the groups have. And so the next one is on prototyping and we registered for that so we're very excited to be doing that.

00:32:58

DM Okay good so the last bit is, no, for the prototyping, really glad to have you over. Our scheduling still makes it hard but it's a bad time for you, is it? You're going to have to be? So other thing, and this is the last thing, is about later and the future of your project and the programme in general. So at this end, we have this IDRC grant that they asked my university to manage. It was a challenge. So for us, you said you hosted your interview, think about your interview as design, we thought of the project as design. I'm a historian and I work with these designers and we try to do art, social science, design science, and all that.

So, the grant finishes in a year from now. That's it. So we can actually legitimately close the whole thing down, make sure that we don't cut people short, but after that, we can stop. Or we can think of a gazillion ways to make this grow, to sustain it, to branch out, whatever. So, part of it is to ask you to help me think, or us, that wide.

And you spoke earlier of needs and aspirations. Not need but aspirations so you can really dream high on this one. And also about your own project. You already said that you are both working on a more masculinity part of your reflection with your partner. And then can you talk about that? Future ways from where you are and also maybe what you appreciated about this programme or didn't appreciate and how this might help us continue.

And I have to be candid here, we have no clue. We don't know if we'll just shut down this and let the things that were planned to grow by themselves like your relationships with Yoko. Or will there be a way or is there a need or are there aspirations for a similar synergy to continue? We have no clue.

00:35:20

MM So that's actually a great question and I'll tell you why. There's a bit of context here. There is another project happening in the UK at the University of Edinburgh and they got in touch with me for an interview. And what they're trying to understand is the way granting bodies are biased in terms of who that funding goes to and what it goes for.

One of the things that Hadia and I appreciated the most about this grant is because if you want to support female researchers, you're talking about gender and STEM, right? You're talking about, and you're giving out projects for people to work on that. But what that's also doing is it is supporting my career and it is supporting Hadia's career as women because one of the conditions was it has to be a women-led grant.

And that ironically is one of the recommendations of this other project the University of Edinburgh is making. You can't just talk about women and STEM and then give all these grants out to, and I'm going to be a little bit blunt here, but give out all these grants to white men in white universities who already have a great deal of privilege, right? And so if you are a female researcher in STEM working in the global north, regardless of how fantastic you are, it is really, really hard to get funding to do gendered research. And that funding often comes with specific agendas, right?

00:36:49

And so what I loved about this was that it ensured that these grants were given to female researchers working in the global north on gendered issues. And so in Lab One when all of us were in the same room together, it was fantastic to see so many female PIs. Because it's not just the research I'm doing or the prototype I'm creating, it's me, right? So this grant has gone a long way in me in STEM, right? Promoting my career and making sure that I now have the funds to support two other female researchers and their careers and what they go on to do.

Hadia and I apply for grants a lot because there's just a ton of stuff that we want to do and our university doesn't give us money to hire teams. That has to come from external grants, right? So if I want to hire female researchers. And often the considerations that I have for women that I hire in my lab are very, very different from the normal considerations, right?

So when I'm hiring a female researcher, I will ask her where she's commuting from. And if she's coming from somewhere far away, if I have a male researcher, if he's coming from somewhere far away, he either has a car. And if he doesn't earn enough to own a car, he will have a motorbike, right? So he will have his own transport and he can use a motorbike. My female researchers will be using public transport and then they will be getting harassed all the way to work and all the way back.

And so when I determine how much, I have to factor that in because I want them then to take Uber or a Careem. Careem is the local version of Uber. And so I want them to take an Uber and that's expensive and so I need to factor that in when I pay them. But where is that money coming from? That has to come from grants, right?

00:38:51

And so at the end of two years when a student like this that this grant has supported has a publication in a top-tier conference like [unclear] CSCW in my area, now she has a shot at going to grad school and scholarship, right? So I think that this grant is not just it's these projects and this is going to be the outcome. It's not just the research or the design or the [inaudible] qualitative data, right? From my perspective, if you were to just stop it in a year, that would stop, right? So I think just yes, I don't know if that makes sense.

DM It makes a lot of sense because what it says is whatever we do, at first we were not really sure to say it has to be by women. So to hear what you find was positive, that you could write and say I'm not telling you what to do and I don't know your context. That kind of things I'm there to support. These are very interesting.

So what about if you were to help us think about a next step which would involve similar actors? Do you have? Can you imagine aspirations as you say? What is it we could try to do from here which might help the best of what you've seen in these two years and now that you hope will happen in the third one?

MM So I think, and I haven't had time to think about this, but I think just top of my head, I think some of the most fruitful things for me have been being physically present and collocated with other researchers, female researchers and having these roundtable conversations.

00:40:44

And so for example, one of the big projects that came out for me last year started two years ago when I met two other female researchers at a conference. And it was at a smaller discussion group session where we were talking about health and we happened to be sitting at the same table. And we realised that there were so many similarities in our context and then let's just look at it. We're all working in our silos so let's conceive of a project that looks at all of this data together and looks at patterns that emerge within South Asia or within a [unclear] context. I think with COVID, it becomes challenging but maybe things are getting better.

But if you could put a group of these researchers who've been working on this or their students who have been working on this who are in grad school, can you put all these researchers together and say well, is there anything interesting if you were to look at certain how gender operates perhaps in Malaysia? I know you have projects from there. Or Turkey or Pakistan or Africa.

How do you from these small silos or these individual rooms that we operate in, can you look at a broader, bigger perspective and collaboratively work together on projects where you're analysing or looking at things together and analysing data that comes out of each of those contexts, right? And so looking.

00:42:26

And then I think the second thing would be to see if there's a way to support female researchers in these contexts to do research or do PhDs. I think that's really, a lot of them will then come back. In our faculty, there are two females and

so looking at, because I think one of the perhaps unintended, I don't know if that was an intended consequence. But I think one of the unintended consequences certainly has been the training that the young female researchers, my programme manager, I hired her.

She had no, she wasn't particularly keen on grad school. She worked with us for a year, she got really interested. She came from a social work background. She got super interested in the research and the work we were doing. She applied to grad school and now she's in the US doing a master's. And so I think that's a fantastic unintended consequence of this grant going to female researchers who are very aware of the constraints that other female researchers have.

So one of the constant complaints that I hear from young students in my department is that because of cultural, religious reasons, they're not able to build the same rapport with male faculty as male students are. They're just informal with male faculty and female students cannot be. And so often they're excluded from research opportunities.

Or in formal hire, female students, we're aware, if my female student says my child is sick or he's not able to go to school this week, for me it's yes, work from home. Do as much as you can around the times that he's sleeping and if you can't, it's fine, we'll figure something out.

00:44:24

You can't go and say that to a male faculty member, right? Male faculty members here are not going to ask their female hiree that they are hiring. If they're hiring a research associate who is female, they're not going to ask how are you getting to work because it doesn't occur to them she's going to get harassed all the way if she's taking public transport and so can I pay her more so that she can take an Uber instead.

DM Are you talking to your grad faculty about this or is it way beyond their imagination?

MM I think that's the thing. I did bring it up. I am a junior faculty member. I am not tenured yet. I'm going to have my mid-tenure review in December this year but as a junior female faculty member, it's really hard to have these conversations. I brought it up in a faculty meeting and I was told but I was yes but yes, those are personal constraints. We can't be taking on the burden or caring for these emotional and mental wellbeings when you're taking on the trauma that your students are also experiencing on the way to work. And this is a concern now for you.

And they're choosing not to take it on. I want it institutionalised so I personally would not have to take it on that there would be pathways to do this at the department level or at the institution level.

00:45:50

DM That's interesting because I don't know if you had a chance in the first workshop to listen to the Argentina project but they're designing campuses that are more friendly to different gender experiences. So it's almost a project in itself to think about how one university environment is gendered in its practices. I recognised a

lot of my own graduate training, my own [unclear] who are graduate students in what you are saying so that's really interesting.

I've written little notes in my margin of things I wanted to come back to I think I've done it all. Yes, so two mini things. One of them is there anything else you want to say in the next 10 minutes that we have?

MM No. I feel like I've spoken a lot already.

DM You haven't but the other thing is let me tell you just a few things I was thinking. So that's the end of what I wanted to say but I'll say a few things from my end just for fun because I have another few minutes.

What you were saying about technology, initially, I know you're now pessimistic but initially you said there were ways by which this technology which seems to make men even more visible could help women exist in practices. And I was thinking about the invention of the mailbox. Have you ever heard that story?

That this red mailbox in the UK or the first ones, which before you had to put your mail, I don't know how it works at your place but in the west, you had to put your mail in your own mailbox, like they still do here in rural Canada. And then the postman will take it and put it in the system. That was the same in urban places.

But then when you invented this anonymous mailbox in the middle of nowhere, it allowed women. And then you had a post office where you can go and fetch your mail. It allowed women to conduct private correspondence that they couldn't conduct otherwise.

00:48:12

MM That's really interesting. That's exactly what we've been thinking about how to do that.

DM So I'm going to try to send you the little article about this because that was a guy who also I think, I don't remember his name. It's a British guy who was also a novelist but he worked in a post office and then he thought about that. And that's an unintended consequence. It was not really, it was partly what he was thinking but not completely. And it did do that.

But then I was thinking about what you were saying at the end, about the new risks of yes, but then whoa there's a whole other universe of risk because you bring strangers in. So I like your reflection on this. So that was one thing.

Another thing is I do the history of humanitarian. That's my main thing. And so a lot of what you were saying about north, south research, telescoping people, dumping researchers in Kenya, all this. So I was recognising a lot of my own concerns and the concerns in my field about doing the history of humanitarian aid from the ground up or from where it happens.

00:49:21

But yes, so we had a convention, a little colloquium two years ago about women and gender in Canadian foreign policy. And the book is about to get out and one of the ladies studied a Canadian medical missionary in southern China and how

being a woman missionary allowed her to do things about what you call private health concerns in ways that were unimaginable by others. And in doing so, she started some social work, social nursing stuff that is still going on in China now. She started that in the 30s or something.

MM That is so interesting.

DM So I'll send you the article. So anyway yes, that resonated.

MM Do you know why that resonates? Because there are places that I can go and talk to women because I wear the hijab because that signals a certain value system that they trust. And whether that's [inaudible] is an entirely different thing but even in my own department, just that signals to them that I am a conservative pure person and therefore I'm allowed to exist in certain ways, right? Where if I dressed differently, I might not be. And so yes.

DM And the third thing was, let me think there, I had a third thing. There was the mailbox, there was this. There was another. Yes, way back then, I don't know 20 years ago, 50 years ago, I had a colleague. I went to Oxford for my sabbatical in the unit on health history at Oxford Brookes University. There I met one lady who was a researcher at the Oxford Centres for Refugee Studies. Patricia Sellick. She'd been writing her Ph.D. at Bradford Centre for Peace Studies on the history of Save the Children. That's how I met her because I was doing a history of Save the Children in Ethiopia.

00:51:35

And she had resigned from Save the Children. She was a worker for them in Lebanon and then she went to work in Afghanistan. And then she decided to go to university because she could not carry on working because she had been tasked by Save the Children to go to Afghanistan and do a report on the education of girls. And that was at the time of the Taliban and Soviets.

And so then she came back to say like you said, these girls are getting an education, just not the formal education you're talking about. But you say, we're going to go there and save women and give them an education is off. And so Save the Children decided despite her report to withdraw from Afghanistan because Afghanistan's public system was not giving girls an education. And she thought that was insensitive and she resigned. Because she said that's not, you're just not looking. There are traditions of education of girls there that if you don't work with this, you're not going to go anywhere. And so she left.

MM Right. That really resonates because that's what happened with the Gates grant that we had, the very first project that I did in gender and development. And I went [inaudible] they don't need the [unclear]. Tell me one thing that it does for them, right?

00:53:00

Because here's the really interesting thing. When I talk to these women, they have their own mechanisms for finances. So they're doing what are called ROSCAs, right? Which are rotating and savings credit associations which are these groups of women who will get together and they'll all decide okay, based on my household expenses, let's all contribute 100 rupees, right?

And so if there are 10 women in that circle every month, there's still a way to save but that's their way of saving. To having this pot, to having this group of women. It's a social way of saving, right? So they'll get together, they'll talk, they'll have chai, and then they'll put in their 100 rupees every month and it totals 1000 rupees. And one person will get that so they can put it towards a business or do whatever.

And so why do they need your mobile wallets and your western financial structures? They don't, right? What are you offering to them that they have not already navigated themselves?

DM Okay. We should say, yes, why is it, this is totally out of our conversation, why is Zoom able to catch up the conversation? Because sometimes you stop for 20 seconds then it comes back and it's as if I've never left you. How do they do that?

MM I think it could just be a delay, right? A slight delay.

DM Okay. So it was a pleasure talking to you and I will send you what I said and I will see you again in the prototyping workshop then. I'm glad you're coming.

MM I hope this was useful and I had a lovely time chatting with you.

DM Yes, everything is great. I learned tons. And then your bit at the end are mega useful for our reflection on how we carry on going. But you'll hear more about that later. Thank you so very much and have a good night then. Take care.

MM Bye.

00:55:05



GENDERED
DESIGN IN
STEAM

ID74 - Improving transportation systems for women in Rwanda

Interview transcript

Interviewee:

Didacienne Mukanyiligira | Principal Investigator
University of Rwanda

Interviewer:

Dominique Marshall | GDS Principal Investigator
Carleton University

Date of interview:

30 September 2021

Transcribed by:

Way With Words

ID74 - Improving transportation systems for women in Rwanda

Speaker Key:

DO Dr Dominique Marshall

DI Dr Didacienne Mukanyiligira

00:00:03

DO Good evening, Dr Mukanyiligira. You are in Rwanda. I am in Canada. It is 30th September 2021 and welcome to this conversation. The first thing that we are interested in hearing you speak about is really the whole history of this project. And by this I mean tell me the story however far back it goes, however wide you need to go, however long it takes. I just would like to see how you came to this, how it developed, how you're doing now and all that.

DI Yes, thank you very much. Initially, I'm a member of Rwandan Association for Women in Science and Technology. And we saw the call from Carlton University telling people to apply for this grant. That's when we put the [unclear] from the group of members of that association, Rwandan Women Association. And we thought why can't we apply for this grant, as we were all women in science and technology? We decided that as our main objective in that association is to support women in every sector, specifically in science and technology, we told ourselves why can't we write this proposal so that we can help women in our country in any way?

00:01:45

We looked at the call and there were many field to apply for. And for us, we thought that if we apply for transport, that would be a great thing to support or to help women in a transport system in Kigali city. We tried to use our observations on existing rural issues in the transport in Kigali city for women, vulnerable people, older people and the children and we came up with a topic in these fields to write on. We wrote a proposal. We are five team members. And we told ourselves why can't we do it? So, we started writing.

But at the end, we told ourselves who could be the PI of this project. They looked around the team and they thought that as I am the only person in the academia holding a PhD degree, I can be the PI and maybe with my CV, we can get chance to win the proposal. Then we finalised our proposal. We put all our efforts to finalise it. I remember we submitted for the first time and then later on we got feedback that we can write a full proposal. When we got feedback from Carlton University, we tried to address the comments provided.

I remember there is the time everyone was discouraged being very busy on the last minute that they may not be able to do it. And I told them, please, don't tell me that. We have to submit it. There is a chance that this proposal would have won it. Why should we be discouraged? Let's do it. I pushed and we made sure that we will submit it. I pushed and we were able to submit the proposal before the deadline. And after submitting the proposal before the deadline, we got feedback

that our proposal was successful.

00:04:05

Therefore, we started getting prepared. I remember we got communications from Kerry Grace. She was informing us that your proposal was selected. She also shared with us the draft of the contract. And I shared the draft of the contract with my university for the signature. They didn't really take long to sign it. The vice-chancellor of the university signed the contract and then we started the implementation of the project. However, as the contract was signed in September 2019 if I'm not wrong, and due to many administrative issue like obtaining ethical clearance before starting the implementation of the project, we couldn't start immediately.

And it was a condition that the money will be transferred to us after getting the clearance. We applied for ethical clearance. It was my first experience, actually. I never did any project that requires ethical clearance. I submitted all documents. I tried to go through what are the requirements to apply for an ethical clearance. We applied. But maybe before I arrive at that stage, as I told you it was my first time to do a project that requires ethical clearance, so I couldn't know exactly who should give me that ethical clearance.

In Rwanda, there are many institutions that can give you permission to conduct research. We first started by the National Council for Science and Technology. They told us that they only give clearance for researchers who are out from Rwanda. As for us, you are the only one who is conducting the research, though Carlton University is coming in as a funder, so it's not coming in as a university performing the research in this context in our place. They explained that to us that only researchers outside the country will request permission from them.

00:06:31

Then I knew, okay, this is not the right place to request for it. I went again in the National Institute for Statistics in Rwanda. They also told me that once you want to conduct the research you have to conduct data collection activities. You need to get a visa from the National Institute for Statistics. But it was not the first one to give us that permit. Later on, we also contacted the ethical committee at the University of Rwanda, and they told us that's the place where you need to get this clearance, so we started the process.

Because maybe going through all those institutions was because Carlton University called it country clearance and there is not that name in our country. We were somehow confused. But later on, or at the end, we realised that what we needed is just an ethical clearance. We knew University of Rwanda is offering ethical clearance and then we gathered all required information and the required documents. Then we prepared them, we submitted for ethical clearance, and we got it.

I don't remember exactly when we got it, but it might have been January or February 2020. I immediately forwarded the ethical clearance to Kerry. But maybe before we got the ethical clearance there was a condition that someone among the team should have a certificate that he has been trained on the ethical or having an ethical certificate. I remember we didn't have it among us. And we requested

support from Kerry, as she is one of the team, our funder who are working closely with us, and her certificate helped us to get the clearance. That's how we managed that.

00:08:56

Then after getting the clearance, I sent it to her. She helped us with the administrative procedures. I really like the way Carlton University works. They didn't delay to transfer the money to the University of Rwanda's account. And I really like the flexibility of Carlton University. Whenever there is any change we need to make, whenever there is something which delays the process or delays the implementation of the project, they are flexible to understand. I like, first of all, that one. They understood us in every request we were making.

We tried to push, but we were stuck with this COVID-19. And the time we were about to go to the field for data collection they were always locked down. We didn't know how to do it. We were asking ourselves, oh my God, how are we going to overcome these challenges, make sure we really finish this project? We are always worried about that. Next, I think we also had the problem of using the money as planned because there were these issues of COVID-19, and it was not easy for us to get computers. And if you look at our budget, the big part of the budget is on the computers.

00:10:42

So, and it was a very big challenge because of COVID-19, suppliers were not having computers and we waited for long. And I remember we just got the first computers yesterday. The first person from our team got the computer yesterday. Mine I collected today. Others will collect theirs maybe tomorrow. Imagine from 2020 having the budget, January, or February and up to now, we are getting the computers due to this problem of COVID-19. Yes, that was a very big challenge. Maybe from the time we are running the project, I told you that the challenges we were meeting of lockdown due to COVID-19 restrictions.

And even we had to change some questions from our questionnaire because of COVID-19. There were few people travelling in the buses, so it wasn't initially as we planned. We had to change some questionnaire. And there was someone who helped us from your university. He's a student in transportation or civil engineering maybe. I don't remember exactly his name. He once helped us to overcome those challenges we were having in the questionnaire due to COVID-19, so we updated the questionnaire.

And later on, after getting the clearance, again, we couldn't go, or we couldn't do data collection without having authorisation of the city of Kigali. We applied for the authorisation from the city of Kigali. We got it and we did the first pilot data collection. After doing the first pilot data collection, there was another lockdown, so we couldn't do it again and it delayed. We couldn't do it on the date we planned, and we delayed. And then, later on, the authorisation expired. We had to apply for an extension of the authorisation, and we got it recently.

00:13:13

After getting it, we did the second pilot data collection. But as some of us are

having many other activities we are combining with this research. What happened, we were about to analyse the data and conduct a full data collection, but we are waiting for the report from one of our team members who is in charge of that analysis. That analyst will give us the report soon so that we make sure we update the online questionnaire. I have already shared it with Kerry. There are three online questionnaires, by the way, we developed.

One for public users in Kinyarwanda and in English. And we also have another one in English for policymakers and the company owners in Kigali city. Those are the three questionnaires we have. And we need to update them based on the report which you will get from the person who is analysing the data we collected. And after that, we need to conduct a full data collection first. We thought one month would be enough for us to collect those data, which may end with the end of October.

And then, we have already planned a one-day retreat where we sit together with the students selected in this project. Maybe I didn't mention about it. We have also recruited four students. One PhD student and three master's students who are working on this project as enumerators. But we thought that it would be better to also involve them in the paper writing. We have organised a one-day retreat and it is taking place this Sunday. Sunday the whole day we will be together, working together with those students. We have already arranged for catering.

00:15:45

We have arranged for transport for those coming far. Everything is in place now. We are meeting this Sunday to work on the literature review, state of the arts, to start working on that. While they will be collecting data, we'll be writing that paper. We hope by the end of December we will have a full paper ready to be submitted to a journal or to any conference. We have not yet identified the conference or the journal. If you have any idea of where we can submit it, please advise us. I think that's all I can say about the process. Unless if I have forgotten something. I can't hear. Maybe you are muted. You are muted.

DO

You think I should know that after a year and a half of pandemic, but I don't. For the paper, I'll ask around. But we could also ask the sector expert who's working with you, Adam Weiss. He might also be good. And so, I'll ask Emmanuel, your regional expert, Adam, the sector expert, and also the graduate students who work with you if they have any suggestion. That's a more practical thing, but I'll make sure that after I will do this. And the other thing is I will make sure that if we ever do that again that we won't say country clearance. not to confuse people like you.

That's us creating trouble. Because like you, in Canada, I asked for my ethical clearances from my university, but they are bound by country regulations, but they manage it. I don't go straight to the country. I go to my university, and they manage the country regulation. We should say your university as bound by country regulations. But really you don't go straight to the country, so sorry about this. Thank you for the story. It's marvellous to hear. It's also a good time to talk to you because you just got your computers, you're having your retreat, you're really in the middle of it.

00:18:02

Let me ask you to go back a little and if you could tell me if I understand well. The call arrived at a good time in the history of your association, and it met some of the goals of your association. Could you go back and tell me about the association and about how your own interest for these questions existed, might have led to that association and then that call? And then, transportation and go back in the origins of the project, your professional and personal interest in this, including why that association was born.

DI Yes, thank you very much. The association was born because we realised that there are very few numbers of women in STEM field in our country. And in addition to that, even those who are in the field tend to drop at the end. They start from primary school. There are many female students or many girl students in the schools. When you go to high school there are still many female students. Some of them, not many, of course, compared to boys do science subject. There are very few doing science subjects.

But when you go to universities, you realise that though there were a number of girls who did science subject at their secondary school, at the university you find very, very few girls in science subject. And at completing the university level, you find very few again in the field of STEM. Meaning that there is a problem. For us, we thought about that problem and see how can we support or make sure we have a big number of women in science subject in STEM professional field. That's where we came up with that idea of forming that association so that we go to high school. Those are the things we do many times.

00:20:32

We do some outreach activities where we go to high schools to sensitise, to motivate women or girls to do science subjects and we act as their role model. Whenever I go there I tell that I'm a doctor. I'm doing this and this. I do this and this. I have these challenges. I overcome them like this. They really get inspired, and they feel like they don't want us to leave them. And then, I think one day we tried to do a survey to see how many there are, what are they thinking by that time. And we planned that after three years, four years we'll go back there to see if something has changed.

That's what we thought about. And again, we tried to also approach women at university level doing research. The researchers, PhD students, master's students we have a symposium where we ask them to submit some of their abstract. We have the symposium, they present their ongoing research or completed research in that symposium, and we invite sometimes university leaders. And that's where we sometimes even discuss our challenges for them to address those challenges. We ask them to see how they can address challenges they sometimes meet.

The next one is we thought that we can contribute to our country, but that association doesn't have enough funds. That's where we write proposals like this one, thinking that maybe we are helping girls and women in our community. But we don't have enough funds, so how can we support them? We apply for this kind of funds where we applied for this grant in Carlton University. We won it and we hope that the outcomes of this project will really impact on the transport of women in Kigali city. That's how we came up with it.

00:22:57

In addition to that, we thought that we can't just ignore that for women to be in a leadership position in the science field they need to have high level of education. That's where we also thought that we should try to be in touch with these women organisations that provides scholarship. Therefore, we sat together. We thought of having a national chapter of OWSD. I think you know about OWSD. We thought of having that national chapter. We drafted that together with the members of RAWISE.

And they proposed me that if I can accept to be the chairperson of OWSD national chapter. I accepted. We drafted all the documents required, we submitted them, and our national chapter was accepted, and it was launched on 18th March 2018. That's why it was launched. And until now we are doing some activities together. There are postdoc which were offered to early-career women researchers. I think you know about it. They were given some awards. They are giving some scholarship. We advocate for women in science in our country.

And most of them don't even know how to apply, how to write an application for admission for a PhD. They come to us. We act as their mentors. Again, there is something else we've seen. That was part of OWSD national chapter. But for RAWISE, for me, at my university, in the University of Rwanda, I'm acting like someone they always see and whenever there is a problem regarding females in science specifically, they always call me. We have this problem. How can you help us with this?

00:25:15

Recently, I remember they called me telling me that there is harassment being done on girls in the school of ICT. Can you please help us with this? And from that time, we organised an activity that can take place regularly. How did they call it? I don't remember exactly the name. Girls and boys we didn't want to separate them because they all have to be aware of what is happening. And we tried to teach them about their values, what is harassment, how they should report it. We thought that that one itself is not enough.

We try also capacitate them in terms of leadership skills so that they feel self-confident. And whenever someone approach them they feel it's their right to say the truth. That's what we tried to do. And there is a private organisation that's called Resonant. They are very good in that. They specialise in capacity building and leadership skills, offering training in leadership skills. We always call them, and we partner with them to support those students. We felt that one itself is not enough again.

And brought something like close mentorship, where they assign us to students to be their mentors, to make sure we become friends with them. Not just because we want to have a talk with them or there is a workshop or there is a big distance between me and those girls. We thought having a closer relationship through that mentorship will help them to speak out whenever they have a problem. That's what we did and that's how we came up with RAWISE to support all those things. I can't hear. You are muted.

00:27:33

DO I'm back on. And so, that's really interesting. How did you, in all this, come up with transport as the thing that you would study with this programme? Why transport and not, say, I don't know, restaurants or I don't know, bridges.

DI Yes. That one I will tell you about it. As I told you we formed the groups. I think two groups from RAWISE applied for this grant and we all got them. There is Dr Marie Chantal Cyulinyana and myself.

DO Yes, I just met her earlier this week.

DI Okay, have you met Marie Chantal?

DO Yes, she told me there's two groups. And there's another one and transportation. And this morning I was looking at that. Hey, that's the other group. I didn't realise that you really came out of the same adventure.

DI We came out from the same university. And maybe even now I'm no longer working for the university. Even Chantal is not working for the university. We have been appointed by the cabinet to work as analysts at the National Council for Science and Technology. For me, I'm in charge of technology, innovation, and intellectual property analyst. It's at the level of the country where we advise the country on different recommendations regarding science and technology. But we didn't leave the university completely.

00:29:06

We are now honorary lecturers. We are holding honorary lecturers' position. We are still teaching. We are still doing research at the university. That's it. And why did we come up with that topic? First of all, as I told you, my field is about telecommunication. I was not part of the topics that were in the call, isn't it? Again, in our group, there was a lady from transportation engineering. She really likes transportation engineering and she proposed that we can do this topic. But again, she did not only propose.

We looked also at the topics proposed in the call and looked at the programmes existing in that area, and we thought that we can come up with that topic. As myself, I told you I am in telecommunication. That lady is in transport engineering. Civil engineering and transport, of course, they work together. And the other two are in mathematics. Meaning that there were no mathematics, there were no telecommunication. There was transport. And in our group there was someone with transport.

And we started looking around which programmes do you think we can solve in our community, and we thought that would be a great topic to work on. Specifically, for myself, I thought there is a picture which circulated on the media by that time where they were riding on a motorbike with a child on their back, so it was really scary if the kid falls from the motorbike. There are things like when it rains, it's not really comfortable somehow. And again, we looked at the existing programmes in the bus transport system where you see that the peak hours in the evening people are competing to go into the bus. And those people sometimes don't care of people pregnant and so on.

00:31:56

I was saying that from my side, yes, they are trying to solve it, but sometimes it used to happen like that. But now at least they are trying to put people in the queue. They are trying to make sure people are queueing and they are trying to bring pregnant women in front, so whenever the bus comes they try to make sure they go into the bus first. Yes, so those are the things we looked at. But now it's in the process of being solved. But again, we looked at the transport policy in Rwanda and we find that there is nothing related to gender in it.

We think that maybe there are some programmes for Pregnant women or women carrying children or older women or old people, vulnerable people may face in the public transport system. We thought of those things. That was just our analysis. Our observation, sorry, let's say, and analysis from just a few documents we read. But we thought that that one itself could not be enough to make recommendations. And therefore, we came up with the topic thinking that once we explore the topic and draft our design questionnaires, that may lead us to recommend something which is based on the survey would be a great idea.

We came up with that. And really from the pilot data collection we did, you can see that what we were thinking before, yes, there are some which are true, but there are some other which might not be true. And there are also something else we got from the questionnaire, the pilot project which we did not think about before.

00:34:24

DO That's a very good questionnaire when you get what you didn't think about before. Why don't you tell me a bit about how you designed that questionnaire, how you designed the whole thing? You had a problem. You decided to try to solve it by having a questionnaire. And so, had you ever done that kind of thing before? How did you go about making that questionnaire and thinking about the whole thing?

DI That's a very discussed question. In reality, it was my first time to conduct this kind of interview, this kind of research let's say because I told you I'm in the engineering field. What we do is we just go through the literature, we define the objectives, problems, hypotheses sometimes and then we try to come up with a methodology to be used where we do some experimental research or where we do some applied research. Which is a bit different to what we did in this case. It was my first time, really, to do a research based on questionnaire.

Yes, we struggled with the team. We really struggled with the team. We started thinking about what do we need at the end of this project? That's what we started by. Yes, we had a problem. We had questions. But from questions, again, we wanted to achieve something like objectives maybe let's say. And then, from those objectives, we told ourselves that from this objective, to achieve this, what do we need to have? Then we were defining objectives and defining or drafting questions based on that objectives. Saying that if we have all this, we can achieve this objective.

00:36:59

If we have all this information, they can help us to achieve this objective and so on. That's the methodology we tried to use. I don't know. Maybe you can tell us if it's the correct one or not, but that's what we tried to do. And later on, we came up with a draft of this questionnaire. We shared it with, what's his name again?

Emmanuel. And the team from Carlton gave us some comments, input. I hope for them they are used to this. They gave us some questions, input and so on. Three people I remember. I don't remember if you were part of it, but there were three people.

They gave us comment and then we addressed them and then we came up with the final questionnaire. But again, I remember we also updated this questionnaire. I told you about when the COVID-19 lockdown was there. Because the initial design of the questionnaire was no longer the same because the conditions have changed. We were no longer travelling during the night because of curfew due to COVID-19, and the restrictions of 25% of people in the bus. Later on, became 30. Later on, became 50. And now we are at 75% of people in the bus.

That's where we came up by updating the questionnaire, based on the situation.

DO It is 1:50. As promised, we're going to stop until two, which will be, I think, eight for you, am I right? And so, we stop for ten minutes. We'll be back. Will it be eight for you or nine for you by then?

DI Ten minutes will be eight for me.

DO Okay, back at eight. I'm writing that in the checkbox. See you in ten minutes then.

DI Thank you.

DO Take care. Bye-bye.

DI Bye.

00:39:18

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Speaker Key:

DO Dr Dominique Marshall

DI Dr Didacienne Mukanyiligira

00:00:04

DO Welcome again. We were talking about how you actually designed your questionnaire. As you were making it, you told me that Emmanuel in Uganda and people at Carlton looked at your draft and helped you put it together. And how you thought about it in a very practical way this is what we want to achieve, this is what we should ask. Now, as you were putting it together, did you read around it? Are there any people in other disciplines who helped you or was it just you, the scientist ladies putting it together?

How did you think about it? Which other disciplines maybe or nothing. It came all out of your head without any traditions in mind.

DI Yes, we were having some traditions in mind, looking at the situation in which we are living in, culture, tradition, that one also we looked at it. We looked at it and also social culture here in Rwanda and the gender culture. How in our culture they consider gender? Something like that. And I remember the comments of Emmanuel was more about gender design. In everything, he was writing gender design and we make sure this is gender design. That's the word I heard most from Emmanuel. Yes, so again, we tried to also use the existing literature.

00:01:58

Yes, but it was hard to get literature from Rwanda because there was no research done in this regard. Yes, we could find research on transport as a standalone. We could find research in gender, but you couldn't find gender design. Gender transport, sorry. That was something lacking, so that's why it was somehow hard for us. But I think with the support of Emmanuel with his experience, with the support of staff from Carlton University, with the support of literature, we came up with a final questionnaire that will make sense for us.

DO As you were telling the story you said that you have an analyst. Is that another discipline or is it the mathematician in your team?

DI She is the mathematician.

DO Okay, that's for the analysis. And so, in this team of yours, there's no social scientist. You really relied on your own.

DI I thought of mentioning about the gender lady because she was not initially part of the team. But from the comments we got, feedback we got before submitting the final proposal, we were also requested to add someone with gender background, so we contacted her. But she was not really available much of the time. She even told us before including her that she will not be fully available to work with us, but she was also giving us some input.

00:03:53

DO Do you remember the kind of input she gave to you or it's too far back?

DI I don't exactly remember what kind of input. Yes, I now remember. When we were designing the questionnaire, I remember we were only focusing on women. But for her she said that normally women is not only about gender, so it's good to hear

also from men. Though you may not focus much on men, but some input or some recommendations may also be needed from men. That's why for vulnerable people and old people we were considering both women and men, so we didn't only consider women.

DO It's funny because you already do that in your training in schools about harassment. You don't talk only to women. You were already doing it in other parts of your activity. You told me you were not focusing only on girls. In a way, she told you what you were already knowing for your other parts. When you were designing the whole thing, you thought Kigali public transport. The community you decided to address is the one that is around your university. You didn't take another place. When you think community, you really think Kigali, do you? That's how you're thinking at the moment.

DI We thought about Kigali because, first of all, we were looking at the timeline of the project. We looked at the timeline of the project. We looked also at the budget. And we thought we could not go beyond that because even the budget could not allow us to go in districts to collect data. But it would be really a good idea if the nature of the project would allow us to go there. But as you know, Kigali city itself has a very big population compared to other places. In some of the places in the rural areas, you may see that only three buses per day go to a certain place.

00:06:31

Or it goes there maybe once per two days, once per three days. We know there are problems there, but people using transport are very, very few compared to people who are using transport in Kigali city. I mean, everyone is coming to Kigali, even those people in rural areas always use public transport in Kigali city.

DO And probably transport in Kigali is buses.

DI We have many public transport, but most of the time when they talk about public transport in Kigali they talk about buses. But for us, we went beyond that where we also looked at motorbike as public transport because they also do public transport. When I want to go faster from this place to this one, I take a motorbike. They take me there and it is cheaper compared to the bus. Those are the transport we are using. There are also these taxi buses. They also take people sometimes during the evening, during the morning when there is a crowd of people taking buses, during the peak hour.

DO Rush hour.

DI Yes. There are a very long queue in the bus station and some people, like five or four, prefer to take a taxi bus and they pay 500 and it takes them to where they are going. We also thought about that one. And again, there are bicycle. Bikes. Bicycles. You know them?

00:08:28

DO Yes, sure, sure, sure.

DI There are those people who are in very low class who don't have much money sometimes or who do not want to queue at the bus stop. They prefer to take bicycle. They pay some money and there is someone riding them from this place

to the other place. Or sometimes there is not even a bus line from where they get off the bus to their place, they prefer also to take it.

DO How on earth did you plan to reach people who are taking all that stuff? How did you plan to reach your interviewees for your questionnaire?

DI Maybe I don't understand your question. You mean how long will it take to interview them?

DO No, how did you plan to reach people that could tell you information about all of that?

DI Okay, I understand now. Thank you for clarification. In the pilot it was hard. What we did was we went to the bus stations. We go to the queue. We start addressing people there. And sometimes the bus comes while you are interviewing someone, and he has to go into the bus. What do we do? You go with her or with him into the bus. You take that line. You keep on interviewing the person within the bus until you finish with the interview. What we do, again, we also go to the motorbike. For motorbike it's hard and the bicycle because you can't go together on one motorbike. It's only one person.

00:10:34

Sometimes you try to walk with the person wherever he's going after getting off the motorbike or from the bicycle. But these people I'm telling you it's hard for us to reach them, but we are trying our best. And sometimes you meet someone who has used the motorbike from this place to this one and he goes into the bus. And as you are asking questions, we also get some information because we ask them where did you come from, what did you come with from your place to this place and so on?

And again, we thought going to the university where there are many people can also help us to get the students coming from their home to university. It's hard to meet pregnant women in the public transport sometimes, even in the afternoon hours. There are hours we realised that it's hard to meet pregnant women. We thought of going at hospitals, but they didn't allow us to go there. We didn't know it's forbidden. When we were trying to go there, they said no, so we didn't have a choice. We are trying our best to really collect data, but we are facing some challenges, of course.

DO Very, very, interesting. You told me you had a questionnaire in English, one in your language. Any other linguistic problems in asking passengers some questions or everybody's covered by the languages you're using?

00:12:19

DI Everybody is really covered. Until now we have never faced any problem where we don't meet someone speaking English or speaking Kinyarwanda. Then again, with this questionnaire, we have the online questionnaires. We make sure we use QR code, so that when we meet someone who do not have time to answer and who is educated, of course, who can use a smartphone, so we ask him or her to scan the link. He scans it and he replies during his own time.

DO Very nice. You've already said some of that when you talked about of the role of

the gender person who joined and what Emmanuel said and all that. But can I ask you from the time you thought about this project to now, has your idea about talking about men, women, gender, family roles evolved? Has something changed or is it pretty much the same?

DI For gender it has been really changed. As I told you initially, though we are involving girls and boys at the university level, it started even after this project. That's when I started thinking about it. Before the project, we were always thinking when they talk about gender, we were always thinking that they are women. Yes, so then what has changed again. Initially, I didn't understand what is gender design. But as Emmanuel kept saying that I came to understand what is gender design. It's a research you do considering gender aspect to produce a product that is good for all gender, men, and women.

That's what I came up to know. But before I was wondering myself what is gender design? What is gender design? And when we were drafting the questionnaire, we were putting women, men. Yes, we put them that way. But with the comments from Emmanuel, I came to know. Even from the workshop we did. Remember we had this workshop organised by Carlton University. It also helped us. And they came to even learn to use Miro, although it was hard.

00:15:15

DO Miro, yes. The Miro.

DI Miro. It was my first time to use Miro. But I realised that to really produce very nice thing. I was wondering sometimes how they produce figures, those things which are very beautiful, which are coordinated well. I really like that one. And you can design something from it and come up with the design you can put in any document, and it looks beautiful. I hope we try to use it in our publication and put it there, use something from it.

DO That's nice to know. If I understand well your initial story, your organisation was about promoting girls in science. And this was the first time when your organisation embarked on a research project, not just on training girls or outreach, am I right?

DI Yes, you are right. It was the first time we conducted a research project.

DO In a way, the question of women in science entered your research.

DI Can I dive in a bit about what you have just mentioned? As an organisation it was the first time to conduct a research project, but as individuals we had been conducting the research projects.

00:16:48

DO As individuals who conduct research projects, do some of you already in their own research have some thoughts about gender-inclusive anything?

DI I doubt we've ever done that. Even I don't think at my university they really looked at including gender in the research.

DO That's interesting. What I understand is that there you are a team of I don't know. How many are you in your transport team?

DI We are five.

DO Five lady researchers who do all sorts of science for the first time think about questions of gender in their own science. Am I right?

DI Yes. We never thought really about that. But maybe I'm the only one with PhD. The other lady is completing her PhD from University of Stellenbosch in mathematics field, where she is applying modelling in health sciences. And the other one is also a mathematician. She's also completing her PhD at the University of Rwanda in the field of mathematics education. And the third one is a professional. The fourth one is a professional. She's doing profession. She's an engineer constructing buildings in Kigali city.

But recently she has also got a job in UN. She's working from DRC. However, she's still working with us. Yes, so the gender one is also a professional. She's not in academia.

00:18:46

DO Do you see that in the long-term this idea of using questionnaires and things like that might influence their own research? This way of opening up to thinking about my telecom, my buildings, my mathematics. These ways of researching that are informed by gender, do you think it might make its way in these people's own individual research? Or do you think that carrying on forward will be more like your association doing more of this? Where is all that going?

DI From my experience, I think doing research-based questionnaire can improve the gender in research, but it can't be promoted itself. It needs to be promoted by university leaders. Because, for me, I might think of conducting research and use questionnaire. I understand now the value of it. You're conducting research using a questionnaire in gender perspective. For me, I understand it, but other researchers do not know about it. Sometimes many of them don't even understand gender.

Sometimes when we talk about gender, they immediately understand women. And some of them are not happy by hearing empowering women. Sometimes some of them don't understand it and they may shy away of it. First of all, it needs mobilisation where you need to teach people. Let's put it in a kind of awareness of how these can help gender, both males and females. Because males have their own problems. The females have also their own problems. You can't say that you don't want to do it, though it may help you or it may help a female. It may help a male or a female.

00:21:18

Meaning that we need to really teach people how research which is gender-based can improve well-being of men and women. That's why I really recommend that if myself I can do it at my university where I can organise maybe something like a public lecture or a workshop, something like that to tell them the importance of doing research which is based on gender because it helps both. Yes, we are doing research that produces different products. But are those products perfect for men and women? Those are the things we should look at.

It is really very important if we do it as a culture in our daily research. But the

problem is we still have a long journey to go with that. But if they really understand, the questionnaire itself can help because it is where we get what is needed to be done from different people. And then, we do this research based on the feedback from that questionnaire to try to improve the wellbeing of people. Because we are doing everything for citizens. And we need to hear or understand their needs so that whatever we produce we don't think about it ourselves as researchers.

We do what the community needs. That's why gender also is part of our daily life, so we don't have to ignore it.

DO In your own telecom research, could you see that kind of attention to the users, or the potential users become more important?

DI Actually, yes, I'm in telecom, but telecom is vast. Currently, my research interest is in the Internet of Things. I even wanted to apply it in this research we were doing. But because of funding, as I told you. Because of timeline, I didn't do it. You know what I thought about? As I'm in the Internet of Things, I thought of applying it to this research so that after collecting the data from this research I will use the Internet of Things. Where women, vulnerable people, pregnant women, women carrying children can use that IoT system or application to track where the bus is, to track if there are seats reserved for them because they are booking those seats.

00:24:44

So that she doesn't fight, or she doesn't stand up before the bus comes at the station, knowing that there is a seat here, there is a seat here and so on. It's possible to apply my knowledge to that one. I was even thinking about that. Employ it or apply it in that one after collecting the data, of course.

DO We have five minutes now, so I'm going to say a few more things and then ask you. The last thing I wanted to do with you is dream further to see where can this go further in your circumstances. Because at this end, we don't have any idea what we're going to do when the programme closes. We got that money from the IDRC and then we designed the whole thing as we went along. And we're trying always to be supportive of the teams that are working. So, we don't even know if we won't close everything in the year and a half.

Or if we will advocate for some things to happen in directions that would help support the existing project and maybe interest in others. I want to ask you that, more immediately, as you are reviewing your pilot before you go and do the big thing, are you involving Emmanuel in this assessment of your pilots or are you doing that all by yourself?

00:26:14

DI On the stage at which we are right now, we did not really involve them. Maybe it's a mistake we are doing.

DO No, I'm just asking. Maybe you could avail yourself.

DI Maybe because they have given us their feedback on the questionnaire, we thought we will conduct this research on our own. What we did is just to correct the questionnaire based on the feedback we are getting. Seeing that this question was not well asked, let's change it this way and so on because of the feedback we

are getting from participants. But we thought maybe after drafting the paper, we can share it with the team from Carlton and Emmanuel. If you have time you can go through and give us some comments.

DO Before you do the big one. On the paper. Not before you go with the big questionnaire. That you will do by yourself. I'm not saying we should do anything.

DI No. The big questionnaire. The pilot is over now, so we are going to go for...

DO The big one. And you don't want any input before you launch the big one. You're okay. You feel safe about the big one.

DI If we wait for the feedback, we think it may take time and we wanted to go straight with it.

DO That's after.

DI And that the authorisation will not expire again.

00:27:45

DO Okay, so then the next moment...

DI Try to make sure we conduct it before the authorisation expires.

DO Yes, sure. So, the next moment when you think you need support is when you will get the new set of data and then you will analyse it.

DI Yes.

DO That's fine. This is up to you to decide.

DI That's where we think we may need that.

DO Another practical thing. In a few weeks, you probably saw that in your email, there is a workshop on prototyping for the kinds of things you're talking about. Like how could you use that knowledge to create a system?

DI A prototype.

DO If you could go or somebody in your team could go, I think it would be really nice to have you there. Try to go and see if at least one member of your team can register because it would be marvellous to have you there. Because you're at a point where you're thinking that way. But even what you have done with your questionnaire, you could argue that's a prototype, right, designing it? It's a case study for us, yes. Stream one. But if you think about it, your questionnaire becomes itself a prototype. But anyway, now you're thinking a bit further for your own research how could that data be used to actually do something practical.

00:29:01

That's exactly the kind of thing that will be so good to have you over if you could. You or a member of your team. It's one minute left. Then I would like to invite you to think about ways...

DI But we can extend maybe.

DO Five minutes. I don't mind, but it's your transport and going home.

DI No, I'm waiting for my husband. He will come to pick me from the office.

DO Take a few minutes then to think about it. Because I heard you say many things. For instance, you think that if you use Miro, it becomes beautiful ways to show your research. If you had some stuff that could help you present what you did as a way to convince people in your university that that kind of research is helpful. I heard you say if you could use that data, if you had more time or money to actually do something with it, you actually practically support people who need places on buses. You also said if you could find journals where this could be published.

What about helping us think about what could be done after? Have you got any idea or anything that you think would be really nice to do next as a programme or your project yourself, or your association?

00:30:31

DI So, with the association, of course, the skills gained from this programme will help us to keep applying for these kinds of projects which support women. I think last time I tried to contact you maybe through Kerry to apply for a grant together in the IDRC, but we ended up not being able to do it. Those are the things we want to do. We need more partnership with you, first of all, which could reach us far from where we are. I know that we can reach far if we keep partnering with you or working with you.

That's the first thing so that we keep applying for many project in this regard, related to women empowerment in STEM or women in gender design in STEM. And again, with the project I told you about, I don't think I will keep it in the box. I still have to implement it, even if I don't get fund from somewhere, I know I can get some funds from the university with the students. I can give it as a topic to my master's students or PhD students and we can still implement it as a prototype, of course, with students. Maybe we can test it for just a small area.

Yes, so then regarding the RAWISE, I hope this will be a very good opportunity for us to win more projects. Even because maybe this project was the first project I did as PI, so I won many projects after this one.

DO Very nice to know. Okay, that's fine. I'll tell you a few things I was thinking about listening to you. First of all, when you get to, say, do that in your class, whatever happens later, there are people associated with these things who have worked on creating apps on phones for security and all that. Don't hesitate to write back and say, do you know anyone, or do you have anybody that could help in that direction? Because this programme has created a whole network of communication and expertise, so don't hesitate to do that.

00:33:11

The other thing is that on your education work on women in science when you were talking about examples and stuff like that, I was thinking of the work of the Canadian Museum of Science and Technology where they do a lot of outreach in high schools and all that. I'm sure that your association that you're the president of the chapter of Rwanda does a lot of this. But if you want to use more of your Carlton connection, we could think of ways of you talking about the educational team of the Canadian Museum of Science and Technology where they do a lot of

that kind of thing.

And maybe it would be interesting for you to see how they work. That's the kind of thing that...

DI You said which university?

DO It's the Canadian Museum of Science and Technology. It's a national museum.

DI Canadian Museum of Science and Technology.

DO Of science and technology.

DI And they have a pedagogical thing which goes in classes and does all sorts of programmes and some of them linked to women in science. I mean, you've got your own education people in your own association, but maybe that would be also some nice partnerships.

00:34:30

DI To partner with them.

DO Yes, maybe. Maybe that would be nice because they do that kind of stuff. I know you have your own network of different national chapters.

DI We want to expand the network.

DO Yes. That would be really nice.

DI It's always good to expand it.

DO One other question that I had is how you've interacted with the programme. But you told me how you spoke to Emmanuel, how you spoke to a research assistant here, how you speak to Kerry, how you were in the first lab. And at which moment you ask for the support of Emmanuel. I think I've heard a lot of you talking about this. I will just ask to finish, is there anything else you would like to add that we have not spoken about which you think would be good to tell the story of your project?

DI The only one I told you about is just about the success I had after being the PI of this project and I learnt a lot of being a project manager from this project. I administered the project, I know how to coordinate the project, to build the administration part of the project. And it was my first time, as I told you. And from there I told you I got experience that also helped me to win other project. I won a project funded by the US Embassy of training female tech graduates in the area of business entrepreneurship and the Internet of Things to enhance the ICT skills for job competition and job creation through small business ideas.

00:36:27

And also, now I won another consultant's work from GIZ, which is where I'm acting as a team leader of the team developing a blueprint for Africa for the development of the smart women and girls in ICT. Those are the projects I'm now involved in. I think it was because of this project which gave me a strong CV to apply and get these funds.

DO Wow. Congratulations.

DI Thank you.

DO That's very, very nice to hear. I'll say that to Kerry Grace the administrator because she takes care of the management of things, so I'll tell her that. She's going to be very happy to learn that as well. Okay, I'll let you go home. And I hope we get to talk again. And I hope we see one of you at the workshop in a few weeks on prototyping. It will be wonderful. I know sometimes your schedule and ours are crazy, but that would be lovely.

DI Thank you very much.

DO Take good care. Very nice to have met you.

DI Thank you. Thank you. Can I say have a nice evening? No, have a nice afternoon.

DO Me is have a nice afternoon. You is have a nice evening. Okay, take good care. Bye-bye.

00:37:49



GENDERED
DESIGN IN
STEAM

ID17 - Gendered commutes in Ankara: women's experiences, strategies and implications for the design of public transit in Turkey

Interview transcript

Interviewee:

Pinar Kaygan | Principal Investigator

Middle East Technical University (METU)

Interviewer:

Dominique Marshall | GDS Principal Investigator

Carleton University

Date of interview:

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Transcribed by:

Way With Words

ID17 - Gendered commutes in Ankara: women's experiences, strategies and implications for the design of public transit in Turkey

Speaker Key:

DM Dr Dominique Marshall

PK Dr Pinar Kaygan

00:00:00

DM It's very nice to speak to you this morning for me. This is an interview where we would like to speak about the whole of your journey in this programme. So the first question is really for you to tell us the story of your project, the best you can.

PK I have been conducting research on gender and design since 2008. It was more on industrial designers and the relationship between gender and their experiences as designers. But more recently, maybe in 2015 or 2016, I also wanted to do something about gender and what we design. So it's not only designers and their work, but also gendered artefacts, maybe products and interaction I also wanted to focus on in my research on gender and design stream.

So when I first saw the call for expression of interest for this project, actually I got excited, because it was a good opportunity to focus on that side of research on gender, technology and design. And when I looked at the possible streams I saw transportation, and it was something we were already discussing with my colleagues.

00:02:00

Because at METU, in my previous university, Middle East Technical University, in Turkey, I was in the Department of Industrial Design, and we at the fourth year studio. Every year we were planning projects in collaboration with the automotive industry on vehicle design.

They were not the typical projects, when we say automotive design, they were not cars, but specific types of vehicle, such as firefighter trucks, or [unclear] loaders. But they had specific focus on a specialised task, with certain types of users.

So in the projects I already started to think about it, because the users of these vehicles were always men, and also for students I observed that especially for women students, designing for a vehicle industry was a little scary at the beginning. So it was something I already had in my mind, being the user or designer of vehicles.

But public transport was another dimension of this, I think, because it was also a very hot topic in Turkey in the last couple of years. In 2016 or 2017, I don't remember the exact date, but a university student was raped and killed by the driver of a public transport vehicle in a city in Turkey. And after that the safety of

women in public transport became a very big issue in the agenda of feminists in Turkey.

00:04:16

So I thought that this project would be a good opportunity to focus on how we can understand women's experiences in public transport, and to question if, as designers, we can contribute to the solution of problems women experience as users of public transport. Because we are used to considering these as issues that should be addressed by social science researchers, and it's correct, of course. It's their expertise. But as design researchers, can we also contribute to the solution of these problems?

So it was something in my mind which led me to write the proposal two years ago. I don't remember how long it was ago. But it is what triggered my interest in this project.

DM Very nice. So can you follow the story, then? So that's the beginning of the story. What about the story after that? So then you got the call, and then...

PK So we got the grant, and then...

DM Before that, maybe you can say how you put the grant together, if that is okay. That triggered my interest. It was one of my ideas. So even before you got the grant, how did you organise the thing?

PK I have my PHD in Sociology, but my background is in industrial design. So I'm quite an interdisciplinary researcher. But I thought that it's not enough. We should be more interdisciplinary. It was also among the expectations of the call. So I have a colleague from Gender Studies, and she had research on women and non-government organisations, and their representation in public life.

00:06:45

So I contacted her and asked if she would be part of the research. And of course as a person, as a researcher who is not familiar with design field, her question was, but what can we do in terms of design to respond to this problem? Are we going to suggest pink buses, which are women-only buses? Because it's not something we support politically.

So I said, no. This will be our research question, what can we do as designers to address this social problem? So this is how I invited her. And my colleague and my spouse, Harun Kaygan, he was also interested in gender and products. We also had some previous collaborative work on gendering of fountain pens. So I also invited him.

And we also, of course, needed research assistants to support us with the fieldwork. And I had a previous student from electrical engineering, who was interested in social science, so I also invited her, and another student from sociology. So we became a very rich team, actually, have different disciplinary perspectives, and who had experience of research at different levels.

And we were all very excited about the topic anyway, I think it was also very important. So we made a team of five researchers who could bring a different

perspective to the question we had in our hands.

And then the grant was offered. But an unpleasant surprise was waiting for us, which is COVID. Because if you have a research project on public transport, and people's experiences in the public transport, suddenly the concerns change a lot, actually, regarding public transport, and people stopped using it, at the beginning.

00:09:29

So we had to find a good strategy how to talk to people about public transport, their experiences of public transport. Also, the university students, who were one group of our participants, they had to go back to their homes and they weren't in Ankara anymore. But Ankara is the capital city of Turkey, and it was the context of our research. So we were focusing on experiences in Ankara. So suddenly we lost university students, they went back home.

And domestic workers, who were another group of users, most of them stopped using public transport. Some of them just quit their jobs, and some others started to be travelling in the car of their employers. So their way of transportation changed overall.

And another user category, the participant category, were elderly women, older than 65 years, so 65 year-old or older women. And they, of course, were maybe the most vulnerable group for COVID, so they completely stopped using public transport. So we had to find a way of talking to them about their experiences before COVID.

Of course it looks easy, because when you tell people, talk about your previous experiences, you may expect them to do this, and of course they did, to a certain extent. But because they had new worries, new concerns related to COVID in public transport, sometimes we realised that they became more important for them, and the previous issues regarding being a woman in a very crowded bus, with a lot of people.

00:12:08

Because of course they remembered those experiences, but it's not that fresh anymore. They are now travelling in less busy buses, or underground, and it's not the most urgent problem for them. So it became a problem for us. But it also provided us with data on what happens if we have a different context in buses, now. Because we discussed with several of them that some of the issues that they experience are due to the high number of passengers in the bus.

So COVID also provided us with a new, I don't know how to say this, but we could ask, what happens if this changes in public transport?

DM It's almost like a new variable. It's almost like a labyrinth. You change the context and you see...

PK Yes. For example, I remember one woman saying that now, with the COVID, there are less passengers in the bus, so we don't have this physical proximity problem anymore, so now men cannot take advantage of the lack of space in the bus. The problem of gaze is still going on, but, she said, I think as women now

we can cope with this. We can handle this problem. Otherwise we wouldn't be able to hear such accounts. So that's why I say it's not a complete disadvantage, the COVID situation. It provided us with, yes, a different context of being in a bus, in a public transport vehicle.

00:14:20

DM And then. So, are you at that stage now, or can you carry on describing the story of your project?

PK Actually we started the project last September, and it was when I am the FPI [?] of the project I moved to another country. So we realised that we had to be quicker than we planned, because we have to finish the project in a year. So we actually planned every stage very well, because we had two stages of the project.

At the first stage, we collected data from women, women passengers who are using public transport regularly. As I said, there are three groups of women, university students who travel from city to campus, university campus, and who often use public transport at night.

The second group consists of domestic workers, who travel between different neighbourhoods in the city, also who travel for long hours during the day, and almost every day. And the third group is older, elderly women, who use not in rush hours, but maybe from later hours in the morning to early afternoon.

So we first conducted the interviews with these three groups of women to understand their experiences. And in our questions, actually we paid attention not to lead them. And we didn't ask explicit questions regarding sexual assault or harassment. We just said that we want to understand your experiences, and please tell us about your regular travels in a bus, what happens.

00:16:45

When you leave home, where is the bus stop? How long do you walk to the bus stop? What happens then? What kind of vehicles do you use? Etc. So it's like a description of their one day travelling in a vehicle and going back home. So we didn't ask, for example, are you exposed to any assault? We didn't ask that kind of questions. But we wanted to understand what it is like for them to be on public transport during an ordinary day.

And in the last part of our interview we asked more subtle questions, such as, do you think that it's different to be a woman in a bus compared to being a man? And we realised that, actually, and of course especially university students, gave very clear answers to this question. They said, yes, of course. Because it's not safe for us. We have so many unpleasant experiences, especially at night.

But for the other categories we realised that, when you ask more subtle questions they tell you more. Because they don't really want to talk about these experiences. But when you, for example, ask, how is your trip in the bus, or, for example, what do you do when you get on the bus, are there any specific places you choose to stay in the car, or sit in the car, or stand... Not car, sorry. In the bus.

They started to tell us experiences regarding how to avoid physical contact with other passengers. So if you ask directly, they don't want to talk about it, but if you ask about their preferences in the bus regarding where they want to stand or sit, or whether they talk to other passengers, or whether it is important for them to sit next to a woman or a man, when you ask those kinds of questions, actually they start telling you some stories.

00:19:31

For example, some of them made very, very specific descriptions of where they want to stand in the bus. They say they prefer corners, because when they lean towards the corner they can see the whole interior, so they can manage their distance with other passengers.

And some others say that it is very important for them to sit next to the window, so that they can look outside, and so that the people sitting next to them don't try to speak to them. So they had, actually, very specific preferences regarding where they will be during the travel.

But if you ask, as I said, explicitly, do you have any bad experiences as a woman, not all of them were willing to talk about these experiences, especially because they don't know us. I am an academic working in a university, and they are not sure about what I am doing. So if I ask them questions about safety, they don't feel safe. That's the problem we encountered in some of the interviews.

But if you talk about just how it is like to travel in public transport, you can get some details about their preferences.

DM And so is that where you are now? Is that the end of the story?

PK No, we finished everything. So this was the first stage. And for the second stage our plan, our initial plan, was to conduct a workshop with industrial design students at university, and it will be in July. But in July, of course, still universities were closed, and it was online education was going on. So we didn't have any students to conduct a workshop with.

00:22:00

So we changed our plan and we invited four designers who have experience with some other types of projects, not any projects focused on gender. So we wanted to see how they will approach such a problem. We first had a half-day meeting with the designers and with experts, one academic from Urban Planning, and another academic from Sociology.

But we didn't invite her as an academic. We invited her as a representative of a local newspaper in Ankara. So she played both roles in our workshop. There is a local newspaper which is interested in social issues in the city, so we thought that they would also bring a new perspective to our meeting with the designers.

We also invited designers and design managers from a company from the automotive industry in Turkey. But unfortunately they forgot the meeting, and we couldn't have them. But it would be, of course, wonderful to see their perspective as well. But we will make a separate meeting with them now, at the end of the project.

00:23:54

So we had the experts and we presented our analysis of the data. So we analysed the interviews with women, using thematic analysis. And then we presented it to the designers and the experts, and then we asked the experts to interpret our findings in light of their disciplinary perspective.

And then we had a discussion all together with the designers, how can we approach such a problem, or do designers, for example, find it realistic to respond to such a problem, or do they think that they need other stakeholders in the project? Or do they think that they should, maybe, develop a specific design method to address this problem? So it was more like a brainstorming at the beginning.

And then we asked designers to keep a diary regarding the process. So we wanted them to immediately write about their thoughts, opinions, about what they can do, as designers, at the beginning, just after the meeting. So how they feel about it. Because some of them had more ideas but some others had reservations.

For example, one of them didn't like the idea of bringing a feminist perspective. She thought this is not something only about women, but also men, and just interviewing women would not be enough. For example, she had such concerns. And I asked her to write this down to her diary, because maybe her idea would change later.

00:26:12

And then we gave them two weeks for the design process. And also during the process they kept writing in their diaries if anything changed, or, for example, what kinds of methods they used, or if they had some ideas, how could they choose some of them and rule out some others.

So actually because we couldn't be next to them, we couldn't be with them, we wanted them to make notes about the process. I wish we could be with them, but we couldn't do that. And then two weeks later they submitted their concept ideas and also their reflections, the diaries, and the descriptions of the ideas, how they think that it will solve the problem.

And then we had a final meeting with the designers. So the research team and the designers came together and we had a discussion. So do they think that it is really doable? Do they think that this can be addressed by design solutions, etc? So we recorded it, but we haven't analysed yet, so I don't [inaudible].

Generally, they felt that designers' contribution would not be that big, because it's a very, very harsh problem, sexual harassment. But still it's not, I don't know how to say this. Maybe it's better not to say anything, because I am not sure yet.

And so this is how we finished the second stage. And now the final stage is, of course, analysing the data, and also we want to make a meeting with the company from the automotive industry, because they are manufacturing public transport vehicles, so I am sure they receive feedback from the municipalities who are their clients. So I also want to see their perspective as well.

00:29:03

And in the meantime we wrote an article about how the vehicle interior mediates the relationships between passengers, women and men, and also partly the driver. So we really think that it's relevant, how the vehicle interior is designed is very closely related to the gender experiences women have during the transport.

But the question of to what extent via design we can address these problems, it still is a question mark. We haven't worked on that part yet. This is where we are now. Very close to the end, but still have some work to do.

DM

That's wonderful, thank you very much for all this. It's full of good information. I just want to go back a little on one thing, is that if you think about the whole project there, and you've said bits of that, can you make links between your own professional experience? Like you've already told me, I was interested in questions of gender. I had a PHD in Sociology, I had worked on public transportation, and this provided an opportunity in a way to put all of these things together.

So, professionally, what is it in your professional experience that is related to that project more specifically? And also maybe in your personal experience, is there anything about what you saw personally that helped that project, helped you put together a project and accompany it? So the link between all this and your professional and personal experience. I know you've said a lot of it, but just if you could stop on this more specifically.

00:31:19

PK

When I was at the beginning of my research career, and when I was reviewing the literature on women and design, women designers, and gender, I remembered there were two approaches to women's participation in design. And one approach was suggesting that if we have more women industrial designers, we can have products that better address the needs of women users.

So it was one of the old arguments to increase the representation of women in the industrial design profession, because compared to other fields of design, women have very low representation in industrial design. So actually it was used by feminist designers, especially design practitioners, a lot in maybe the 1990s, or at the beginning of this century.

But I was not completely comfortable with this idea, because is it really the designers themselves who make the decisions about the expectations and needs of women or men users? To what extent do designers have that power, to challenge or change gender relations in the society via their designs?

Okay, we see that especially the researchers in the field of technology studies documented very well that the products we design, they convey certain gender relations. For example, when you design a product addressing women or men users you ascribe certain features, certain roles in that product. You say, this is for women. This is for men. So women like these kinds of products, because they have such and such interests, characteristics, traits.

00:34:06

So you define, and to a certain extent, not redefine but just strengthen the gender roles in the society as a designer, via the products you develop. Because the marketing is focused on these roles to sell more products to women, more products to men. But just suggesting that women designers will understand women users better, it has this essentialist perspective. It links women designers to women users. But it also implies that women designers can only design for women users. It makes sense, when the user is women.

So I thought maybe we should look at this from a different perspective, and actually the case of public transport is very fruitful, because it's not something designed for women or men specifically, and its end user, or its user... Sorry, I should say it in a different way. The people who make the purchase decision are not the men and women using it. So it's not something a company can design, develop and market to the people considering the stereotypical gender roles.

But on the other hand, we know that the majority of public transport users are women. So we have this data. We know that mostly it's used by women. But it's not designed for women. Actually it doesn't have a specific gender, because it's designed for everyone.

So I thought that looking at such a product, which is not specifically designed for women or men users, could show us some subtle things we haven't seen before in the existing research. Because when you look at, for example, shavers designed for men or shavers designed for women, you can tell this story. Okay, it's soft edges and soft colours, or maybe pink for women, and it looks like more a cosmetic product.

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And when you look at shavers for men it has more sharp edges. It has a more dynamic form. So you can read this more easily when you look at these product categories. But public transport, it's a completely new story. And there were also other works in the literature which are based on critical design perspective, but they were rather conceptual products. So it's not something that is integrated into people's everyday life.

I think talking about a conceptual product and a real product that is experienced by the users every day, they would provide us with different types of data. That's why I got so excited about understanding women's experiences in public transport, and questioning the role of design in improving these experiences.

So yes, it has its roots in my PHD years, in 2008, 2009, actually, that back. But also as I got familiar with the literature, gender and products, I thought there was an important gap there. What if a product isn't designed for women or men explicitly? What if it's claimed that it's for everyone? Then what happens?

DM

Very nice. So I'm going to ask you, you said initially you conceived of that product in Ankara. This is where I think you worked, and you wanted to do public transportation in Ankara. Can you tell me a little more about this choice of the community you would study, and how you thought about the community you decided for your project?

00:39:25

PK We decided that we had to capture the diversity of women's experiences in Ankara. Of course it was easier for us to focus on university students' experiences, because we were academics, so they were all around. But we thought that there would be other factors for, for example, domestic workers. They travel for very long distances in the city, and they travel between different neighbourhoods in terms of social status. So we wanted to capture those experiences.

And we also wanted to see how experiences differ in different times during the day. Experiences during rush hour, experiences during the day, and during the night. We wanted to capture all of them. This is why, actually, it was very difficult for us to find participants from the first category, the domestic workers' category. Because they really didn't want to talk about their experiences so much, because they don't know us.

As a middle-class woman you go and talk to them about their experiences, which they are not comfortable with, and they don't really know what academic research means, or how it will impact themselves. For example, who will hear about their stories? Although you explain, why should they trust you? Because they don't know you. So if we conducted the research only with university students it would be very easy for us.

00:41:37

So we created a challenge for ourselves, but I think it was important to understand all these diverse experiences. Also for, for example, elderly women, we realised that they don't use public transport that often because they have cars, or maybe their children would carry them when they needed to go somewhere, or maybe if they travel with their husbands, their husbands would drive the car.

So for them, public transport was kind of a freedom. I am alone and I'm not in my safe car, but I am going to the city on my own in the bus. So they attach different meanings to public transport, because it's not something ordinary for them. They go to the city to meet their friends using the bus. So it's different, but it's also being in the social life of the city.

So otherwise, if we just focused on university students maybe we would hear more explicit stories about sexual harassment, but we wouldn't catch the perspective of other groups of women.

DM Very nice indeed. So I'm just curious, to contact the domestic workers was the NGO of your colleague important? How did you do that?

PK How did we get access to domestic workers?

DM Yes.

PK We contacted the people we know in Ankara, and we asked if, for example, the women working in their home or the women who are taking care of their children, would they be willing to talk to us? So of course we had to use our contacts to get access to domestic workers. And some domestic workers also recommended us to their friends, but it wasn't very often, because they were really tense about this. A woman is asking me questions.

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For example, some of them didn't want to open their cameras. They said it should be just their voice. And some of them, for example one of them, I realised that she really hesitated at the beginning at the interview. She gave very short answers, just yes or no. And then I told her, if you don't feel comfortable, you don't have to do this, because this is, of course, something voluntary. If you don't want to talk, okay, let's not talk. And she said, okay, I don't want to talk.

Because I realised some of them couldn't say no to their employers. So it is important for me to understand if they are really voluntary or not. Because if they are not then it doesn't make sense. Why am I interviewing you? You should volunteer and you should be willing to talk about these experiences. I don't want to torture people with my questions.

So in one case I said, okay, if you don't want, let's not talk. And some others, they cancelled themselves later. And I remember one participant, she was actually talking very well, but her husband was home, and she was in the kitchen, and her husband came several times to the kitchen to check what I am asking to her. So I realised she was a little nervous, because how can she talk about such experiences if her husband is so close?

Some of them are okay, they can talk. But it's not possible for all of them. If she is exposed to harassment, maybe she doesn't want to talk about it next to her husband. Or her daughter, for example. Some of them preferred to talk about their daughter's experiences, not themselves.

00:46:30

So it wasn't the same with all of them. University students, they were really very comfortable, because they also discuss these with their friends, and they want someone to do something about this issue. So they are very open. But with domestic workers, it was very difficult, and for elderly women some of them became shy to talk about this. Because it's something about their young ages, not today.

But they told, for example, I observe young women being assaulted or being harassed, and I intervene. So they told us that kind of story. For example, one of them said, I saw a man staring at a young woman. And I just put myself between them. I just provided that the man cannot see her anymore. So I covered her with my body. So they didn't tell us their own stories, but how they intervened when they encountered.

Or for example, one of them said, there was a very young girl in the bus, she wasn't aware of the intentions of the man next to her. So I said, come here, to the girl. Not shouting but with high voice, so that everyone in the car realised what the man was trying to do. So it's another way of warning him. So they told us those kinds of intervention stories, the older women.

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But yes, they were not, also, so comfortable about talking about their own stories, not all of them. Some of them were, yes, they were comfortable. Actually, one of them contacted us. She said that, I heard from a friend that you are

making interviews on this and I want to talk to you, because I have a lot to say. We also had those kinds of participants, but the majority of them were a little shy.

DM Very nice. Now I'm going to change tack all together. You explained very well at the beginning how that programme gave you the opportunity to work more actively with your colleague in gender studies, and to go back to your own sociological reflection. Now can you speak more directly about how this programme allowed you to think about the relationship between disciplines, between industrial design and other disciplines, how did that go over these two years? What were you hoping, and what did you discover?

PK I think my being in both design and sociology was an advantage, because I could see my Gender Studies colleague's perspectives very well. I had to translate, sometimes, our concerns to her. Because especially when we were preparing for the workshop, with the designers and the experts, of course we prepared some questions, and some of them were not so easy to understand for her, because it's a different terminology.

Now I don't have a specific example in my mind. Maybe if I think, I can find. But her terms are different. Her way of asking questions is different. And still, when the designers submitted us their design solutions, we, of course, had a chat about it, and she said, do you think that these are good solutions? Because I can't understand. I can't say if they are what we expected or not. So my having this interdisciplinary perspective...

00:51:12

DM Background.

PK Yes, background. I think I bridged different perspectives between designers and the social scientist. And, of course, her questions, they enabled me to reflect on my perspective as well. Because when we moved to the second stage, the design stage, I became a designer, because I'm writing a brief. I'm trying to lead the designers. Maybe suddenly our terminology changed. We started to talk about design brief, design process, design methods.

And then she asked me some questions, so that I could remember our previous discussions about the data, about the participants. I think it had that kind of a positive impact, having a researcher from social science. Because I can suddenly become a social science researcher, but then a designer. So it's good to have someone who has a more stable position in the project.

DM When you were telling the story of the project, there were many moments when you really thought hard about which method, which sample, and all that. So could you speak about moments in this project where you tried something new about your method, or something new about the way to approach a question? Was that an occasion to experiment with new methods, or different methods? Or were they old means that you used in different directions?

00:53:16

PK I wouldn't say new methods, but maybe we had to revise some of the questions that we asked women. As I said, we realised they don't all respond well to explicit questions. Or, in the analysis, we realised that we had to distinguish

between themes related to design of the vehicle, and the strategies women developed that are not necessarily linked to the vehicle design.

So we had design, and on the other hand we had findings that would inform policy-making. So how should we separate them from each other, because we can't focus on everything? We had very rich data, but we had to be careful about our claims, what should be connected to design and what cannot be connected to design. And we realised that we shouldn't, also, confuse our designers. We should provide them with very neat and well-clarified data.

Of course we also provide them with direct codes from our participants' interviews. But as a researcher you carry out the interviews. You know the perspectives of the users. But how can you translate this to a design problem, or to a design brief to guide designers? It was one of our concerns. Because you can't give everything to the designers.

Of course if this is a very long-term project, or if designers are involved from the beginning, maybe you can do this. But we have to play the role of translators, or maybe interpreters, as researchers. And how can we do this? We had some discussions about this within the research team, for example, what should we present?

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My colleague from Gender Studies, she wanted to focus on more policy-making aspect. But we said if we give all of this to designers, it will be too much for them. We should decide which information is important, or which is the most important part of the data. We should define the hierarchy if we will provide designers with data.

So it was something we spent some time on, both with discussions and we decided, maybe if we write it down first in the form of analysis, in the form of an article, a paper, maybe it will also help us to see the narrative that we should take to designers. So we developed some strategies but it's not a method. It's more like our strategies to find the best way of presenting our data to designers.

DM Now if I ask you to think more specifically about what this programme has done for your project, if I hear your story well, the very fact that there was a call helped you to put together something which you had been thinking about. But if you then think about all the other things of the programme, receiving the money, being put in contact with the programme, the whole thing, so could you talk about how the programme influenced your project, or the relationship between the programme and the project? What happened?

PK First of all, it, as you said, motivated us to do this research. And it provided us with a structure, also, in terms of how interdisciplinary the project team should be. Or, for example, it was one of the requirements to focus on women, rather than both women and men. So it provided us with a structure. But apart from that, I felt more free, to be honest.

00:58:58

We had, of course, a goal, a common goal within the programme. Maybe it would be better to have more interaction with the other projects, I think. I think

we all would benefit from seeing what others are doing. Because we had some workshops at the beginning, but then we lost contact. But I am very curious about what other teams are doing. I think it would be good.

It's of course good to have this freedom. You have your own schedule, you have your own challenges to cope with, so it's good to be flexible. But some dialogue would be good, I think. I felt that it's a little missing. Sometimes I didn't think that there is a programme with a lot of projects. It's like I'm on my own, with my own research team.

DM What about the meeting or the interaction with the regional expert, with Yoko Akama?

PK I don't remember his name. He is not the regional, but industry expert. He had an engineering background, so he couldn't, maybe, much contribute directly. But he brought a fresh perspective. He recommended us some, for example, journals from that field we were not familiar with. So he brought a fresh perspective. I think it was a productive meeting.

We asked him if the transportation industry, if they had an interest in gender issues before, because he also participated in some projects. So we asked if gender became an issue in these projects. And he said, not directly, but in some indirect ways. So it was a productive meeting, I think. We had an inspiring talk with him.

01:01:39

DM And what about the regional expert, Yoko Akama?

PK Yoko, we had a meeting with Yoko, and these parts may be a little confidential, I don't know. But she told us that we don't seem like having much help with the project. So she said, if you don't need a specific advice, you can go on. You look fine, she said. Of course at the beginning she also had some recommendations regarding not focusing on only the vehicle interior, but considering this as a larger topic. Also looking at the safety issues on the street, etc.

But we said that we want to keep it focused, because it's not a huge project, and if you want to look at everything then you can't see the details. You can see the big picture. Yes, it's still important. But there is some existing research on the big picture anyway, so we wanted to focus on the vehicle interior and the design of the vehicle interior. So this was a discussion between us.

And then she said that, okay, so you know what you are doing and you don't need much help, so good luck with the rest of the project. So we didn't have much interaction after the first meeting.

01:03:18

DM So part of the programme we were trying, and in your case it doesn't look like it worked very well, to connect you with projects that were doing similar things. But you were not offered to do that. So maybe, I know you're at the end there, but if I understand well, if we went back to the projects that are doing transportation, maybe we could at least find a way for you to share experiences at this time, when you're still publishing. So I'll make sure to make a note of that.

PK Maybe instead of grouping us in terms of region, topic-wise grouping could work better, I think. Because we came together with other countries from Asia, but our topics were very different. So if I came together with researchers focused on transportation, maybe we would have more in common, because the problems are so similar. When you look at the studies in Australia, they have a project on public transportation and women. So it's a different, maybe, continent, but the findings are so similar.

DM Yes. And so the regional grouping is, especially for Asia, we only have three Asian projects, and Pakistan, Malaysia and Turkey is absolutely different compared to, say, our Latin America grouping, where people were in similar situations. But there was an ambition, also, to connect people who work in the same sector. And the other sector expert that you met.

So I know you're reaching the end, but I'll make sure to more actively inform you of what's happening on the transportation and safety issues in other projects, and maybe at this stage of your project to know what others have been doing might help your publications and your sharing.

01:05:26

And you were not, I think, able to go to the Lab II [?] meeting on gender, which was organised by Ciara and Raquele this summer. You were not able to participate in that.

PK No. We are very busy with our own workshop with the designers.

DM That's fine. So the last part of this is about the future, about how do you see the sequels of this adventure for yourself, and how much you dream of some things that at this end we could think about? So the project and you, and your safety and public transportation and this project, for your own sake, but also maybe help us think about ways that this programme could facilitate some sustainable, or even augmented, projects once this finishes in 2022?

PK One ambition I have is to extend this research to other industries, if possible. I think it shouldn't end here. If we started to talk about how the design of products, or interiors, it's also a product, may have an impact on experiences of users in that context, I think we can ask the same question for other types of products, as well.

If we can look at other products that are not specifically addressing women or men users, maybe we can find out new valuable things about gendering of products via design, or how we can really contribute to solutions of gender problems during the use of these products in everyday life. This is one thing. So expanding the context in terms of the industry or the type of the products.

01:08:00

And another ambition is, I would like to discuss these findings with the transportation industry. As I said, I would like to have a meeting with the company in Turkey. But beyond Turkey, because as far as I understand from the project reports I read, these problems are not related to Turkey. They are really common. There is a very recent research project on Germany, Denmark, and some other European countries.

Maybe they are not so harsh, still women worry about travelling at night, or they still think about what to wear if they will use public transport. So this is something I think, maybe if the focus of other projects is similar, maybe even we can come together and compare our findings, compare different contexts.

So I think the next step should be, okay, in the project we focused on a specific context, a specific country or a city. But how can we make sense of our findings when we come together and compare the data from different contexts? I would like to ask this. So in two ways, in two directions I would like to extend it. In terms of industry and products, and different contexts.

DM That's interesting. And so concretely, you are a designer, concretely this programme might close in 2022 with this exhibit where things will be shared, and where every one of the 20 projects goes their own way, and has had this moment where they were invited to think about gender and design and STEM.

01:10:20

But if we were to think about ways to sustain, and enrich this programme, you think now that if we provided opportunities to compare findings from Carleton that might be useful, do I hear that well? More opportunity to...?

PK Yes. If there are similar projects I would like to see their findings, and maybe we can come together and think about what we can do together, as a next step. Maybe this may lead to a new project. Who knows?

DM Very good. Pinar, that's all I wanted to ask. Is there anything else you would like to say before we go?

PK No.

DM Good. Thank you very much. I have to tell you that, just for fun at the end, not now but I'm a very frequent user of public transportation since ever. So to me what you were saying was very resonant. And in North America, I don't know if it's the same in Turkey, but in North America in general, people who have a bit of money do not use public transportation.

PK It's the same, yes.

DM So the only way they do, and in otherwise the same, is that there are dedicated routes in the morning and the evening for people who live in fairly wealthy suburbs to go to work downtown. So there you see middle-class people reading their book, in these very dedicated fast lanes. But otherwise it's really an experience for young people who have not bought a car yet, and for people who have little means. And having a car is a sign of autonomy, citizenship, a driver's license, there's a big deal attached to being a car driver.

01:12:34

So public transportation is a very specific social thing, and so I'm often like an interloper in it, because I'm not using it that way. So it's really interesting to hear all that you are saying. I was very pleased to hear this. So I wish you all the best, and I hope we talk again. And I know that... I'll stop the recording now, because it's not the interview. I want to stop...



GENDERED
DESIGN IN
STEAM

ID40 - Assessing the impact of solar panels to improve energy access for women in rural Ghana

Interview transcript

Interviewee:

Samuel Gyamfi | Principal Investigator

University of Energy and Natural Resources

Interviewer:

Dominique Marshall | GDS Principal Investigator

Carleton University

Date of interview:

28 September 2021

Transcribed by:

Way With Words

ID40 - Assessing the impact of solar panels to improve energy access for women in rural

Speaker Key:

DM Dr Dominique Marshall

SG Dr Samuel Gyamfi

DM Good morning, Dr Gyamfi. It's September 28th 2021. We are delighted, and I'm delighted to meet you for this conversation about your project. The first question is a really large one and a free one for you, and it's to tell us in a wider in a freer possible way, the story of your project from when you imagined it to where you are now.

SG Thank you very much. The name, is it Marshall, right?

DM My name is Dr Marshall or Dominique, if you want.

SG Dominique Marshall, yes. Thank you very much. My name, as you know, is Dr Samuel Gyamfi. I'm the deputy director at a Regional Centre for Energy and Environmental Sustainability, which is a World Bank centre that is focused on energy and environmental sustainability. We have a project in Ghana on the islands, so island communities in Ghana. Now in Ghana, energy access is not a big challenge compared to our neighbours. We have access rate of about 86%.

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Now, the rest 14% that is left, it's not that we do not have capacity to connect them to the grid. We have excess capacity in terms of installed electricity capacity to be able to supply electricity need of this 14% But the challenge is that these communities are mostly in the island communities, they are in the lake side along the water lake, where it is very, very difficult to extend the grid power to, because of the topology and the water and all that. These island communities are mostly without power.

Now, there have been some projects where donor agencies have been able to put up mini grid small power plant based on solar for some of these communities. But by and large, a lot of them are without power. We wrote a proposal to try and see how we can help these communities. We got funding in a form of just equipment, so solar equipment, so solar PV equipment, so solar home systems. Small modular kind of system to be able to give to this communities so that at least a household can have access to light and will be able to listen to radio.

Will be able to listen to music. That is what we've been doing for the past, since 2016, thereabout, we've been working on this. Now, what we have realised is that the problem is much bigger than we thought, because these people have been without power. Their locations are not very accessible. We've been given them power all right. Sometimes it's very difficult for us to get the maintenance done, because then we have to travel all the way from the university to these locations. We wanted to see how we could build capacity in these areas.

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Now, we've also realised that in terms of energy access, these communities have special needs because where they are, they have challenge not only with power, but also challenge with other things that comes along with power. If you don't have power, you can do very little. We thought that if we are able to get information when it comes to the communities, the gender, men and women, the vulnerable in these communities and how their challenges are.

The strategies that we can use to expand this, to get data so that we have very deep knowledge about their behaviour and their challenges, their problems. Without access to power, the problems that they've been encountering and how we can broaden this. Get appropriate data so that it becomes some kind of a national framework where policies can be drawn so that we can target these communities in a much more comprehensive way to be able to help them. That is how this project came about.

We saw this advert and we thought we could apply and see if we can get some funding to support what we're already doing. We want to have a framework based on which these communities can have access to power. So, what strategies should we use? How should we approach the gender issues there? How should we approach the traditional issues? How do we approach some people who, they're fishing, so the job that they do, how could we improve on their earnings and income?

00:06:19

How do we empower them to be able to have the opportunity to also engage the central government and even the local government to see how their problems could be addressed in a better way than what we are offering. What we are offering is just from our side as an institution, but it's not coming from the central government. We wanted to have more information on this so that we could have a better understanding. That is why we are doing this project with you.

DM I'm looking there because I'm taking notes as you're speaking. Thank you for this. What happened after? You apply and then what happened?

SG We applied and we were shortlisted to submit. First, we applied online and filled some forms. We were shortlisted to submit a full proposal, which we did, and it went through your internal reviews over there. Luckily, we were one of the projects that was selected to benefit of this gender design scheme. We are very grateful for that.

DM What did you set to do after? You received the grant, and then?

SG We received the grant and we had a budget for the different activities that we wanted to do. Because we wanted to offer much more information, and looking at the fact that most of us are very busy, so we put two students to work on the project. One of them is an MSc student who is working on productive use of energy in this island communities. We also have a PhD student who is also working on an intersessional study of gender and the productive use of electricity in lakeside communities along the Volta Lake in Ghana.

00:08:54

These two students are actually doing the day-to-day activities. We've been to the field for data collection. After, we had to do develop a questionnaire, which was vetted and tested. We did first community entry to be able to refine it. We did that and then we came back to do the corrections that we needed to do. Then we went to the field for data collection. I think we've collected quite a comprehensive data information on these communities. These communities are very difficult to access.

In terms of strategy to access them, because you will need a boat to be able to go from one community to the other. We did all that and we've gotten the data that we need, and they are now working on the data and see how we can make meaning out of what they have collected.

DM As you designed this project and you had to choose, you said you want to do a first small entry test questionnaire, and then you did the big one. You said earlier that these communities were the ones that had difficult access to energy. But how did you decide which community exactly you would work with? Did you take all the ones of the region or did you select? Samuel, which communities are you talking about?

SG Out of the island communities that we've been engaging, we selected some, I think, four or so, four, five communities to do the test. These communities are very, when you go there, they're very similar when it comes to demography and what have you.

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In terms of testing, we wanted to make sure that the information that we get will be good enough for us to be able to refine it to represent what the communities would want to see done or changes that they would want to see in the survey instrument. That is what we did. Five out of the number that we did a test on were selected among the lot at random and looking at also accessibility to this place.

DM Did you have a language decision? What language do these people speak and how were you able to communicate with them?

SG Yes, they speak their local language. The language is called Ewe, E W E. This Ewe language, we what we did was that we had local people that we were working with. We also had some enumerators who were asking the questions. We had some people, because we've been working on this island for quite some time, we have developed some kind of relationship with them. We have people that we normally use to help us when it comes to translation and what have you.

Also, we selected, I think, there were about ten or 12 enumerators when it came to the actual fieldwork. Now, the people who are on this projects, who went to do the community entry, two of them are from the region, so they speak that language. Dr Daniella Sedegah speaks the Ewe language because that is where she comes from. Then Nerissa also speaks the language. That is where she comes from. It was a bit easier to get the language across to them.

DM These community entry were done orally, these were meetings? The enumerators did meetings one by one by one?

00:14:24

SG No. The enumerators were with the team. The team went there and people were with them. But after that, the enumerators were also trained. But the first entry was just to get in touch with them, for them to come along with them, to engage the community, to have a few discussions to know the way forward and all that and the possibility of refining the questions.

Then after that, when we plan on the field visit itself, the enumerators were trained on how to get the data, how to ask the questions, how to code, put them in the computer. We had tablets for them to do that.

DM If I remember well when we talk about which community you want to engage with, you think that by selecting these five in that particular region, maybe what you find about access to energy could be expanded to other less well-service community? Is that what I heard you say at the beginning?

SG Yes. For the Volta Lake that we are focusing on, it's more representative of this community, but they will do similar work. Their settlements are quite similar.

DM As you did that training to make sure that your enumerators understood how to engage with the community. What is it that the training was imparting? What were they insisting on? What is it that they were telling them to do to engage with the community?

00:16:38

SG The enumerators were supposed to... We had developed the questionnaire, we wanted them to understand the questionnaire itself and the information that we are looking for, so that they would themselves know how to ask the questions in a way we want the questions to be asked. We took them through the questionnaire and what they need to know and a bit of briefing about the project so that they have the overview.

Apart from this overview of the project, we also took to them through how they could use the gadgets that we were using, and how they could enter the data or the information that they get from the respondent into the tablets and so on. And how they can submit the data and things like that.

DM You told me that you had been working with that community since 2016, or these communities. If I ask you to go back a little and talk a bit longer about how this particular project that we are seeing you doing with the [unclear] there. So, how this project fits into your larger professional interests and your larger personal training, where does it arrive? You already said 2016 you've been working with them. Can you speak a bit more about this? Where does it fit on your own research trajectory?

SG Now as a University of Energy and Natural Resources, we collaborated with the Chinese Government to see how they could help reduce... It's more on climate change and the support of the Chinese Government towards climate change in developing countries and in island and lakeside communities and the vulnerable communities and things like that. With the proposal that we wrote was more targeting these communities.

00:19:15

It was part of the university's contribution to help these communities, and also to contribute to the agenda of reducing climate change for these island communities. From where I sit, I used to work more on the technical side. In terms of the design of the systems that we were giving to them, I did the design in almost all the cases for the solar home systems. In terms of how the systems were supposed to be, the inclination, the angles and all that, that we needed.

We had to come up with this data to give to the Chinese so that they could prepare the systems according to these specifications to make sure that they could meet that standard that we need. It will meet the environmental requirements and all that. That is what we did. It went through their procurement and all that. Unfortunately, the problem that we had was that this support only came in the form of equipment, there was no money for the implementation.

As I said, to move to the island communities, you need a lot of funds, because then you have to get a boat to cross from one to the other. There was nothing like funding in terms of cash to be able to implement a project, so we had to come up with a strategy to get some funds to be able to implement the project. Even though the items were given to us for free, if you want. There was no money, so we decided to attach some small costs to the item so that we could use that to move to the islands to do the implementation. That is what we did.

00:21:35

In fact, the one issue that we also had in the general framework of the project was that we were supposed to get waiver when it comes to clearing the items from the Ghana Port. Which, in fact, initially we did not get as we anticipated that the government would give us a waiver for it. The university had to look for funds in the form of a loan to be able to clear the items. So, we did that. We had a lot of plans need to put in place to be able to settle that amount and to be able to get the items across to the island communities and all that.

That is what we've been doing. We have had students to work on this project ever since they started. First, we were teaching them how to build their capacities in terms of the solar design, in terms of installation, in terms of maintenance. We've built a lot of capacities. We've trained about 300 technicians out of this project. Some of them have been able to move out on their own and they are able to work on the solar PV companies or small, small solar PV industries and things like that.

Some of them, also, were students and they graduated, and by the time they left here, they've built their capacities to the extent that they could easily be employed. Some of them, we also trained them so that they could employ themselves, because the industry is such that if you know the technicalities, how to fix them. When it comes to you setting up on your own, you can easily do because you then get the systems from the vendors and then you do your costing, you charge the client.

The client gives you the money and then you procure and you do the installation with a warranty and everything for them. That is what we were doing, building capacity throughout the country, this project, and also helping the island communities. Coming up also with maintenance strategies and maintenance protocols to help sustain energy delivery in these island communities that are very,

very difficult to access when it comes to where they are.

00:24:23

In a much broader framework, I will say that we had some technology transfer and capacity building. We've also been able to help the disadvantaged in the communities. The university name has also been out there because we go with stickers of the university and we put them on the things that we install for them so that we also disseminate this kind of information to the communities. That is what I will say in a much more broader way.

DM If I understand well, in 2016 when you say you had this programme with the Chinese Government, so did the programme come out of available funding from China? Or was that already a project that you had in mind and then the funding allowed you to do it? How did that...?

SG Yes, it's a project that we had in mind. But there was this opportunity where the Chinese Government, so they have set up what they call National Reform Commission of the proposed Republic of China, and they were helping different projects. They were sponsoring different projects or different ideas in developing countries, in the Pacific and also in Africa and so on. What we thought we could present, a colleague of mine went for a conference there and this opportunity was given at the conference.

00:26:23

It was based on this communication that we also came up with this possibility to access these island communities. We had to develop the proposal and submit it to the National Reform Commission of the proposed Republic of China. We submitted this to them and it went through the same processes that yours went through, and we were selected. There are other countries that also benefitted but they benefitted in different ways.

Some who needed to change their street lights using LEDs have benefitted in that way. It depends on the proposal that you submitted.

DM The programme was to research items not to manufacture them. I don't quite understand what happened in the harbour. Was China delivering the manufactured items?

SG Yes, China was delivering the manufactured items, but we had to give them the specifications. We have to make input into what they could deliver.

DM The programme is, here is Chinese money to develop at your place, items that then China will manufacture so that you can actually distribute them. But the Chinese programme did not come with the transportation costs or the logistical costs to actually bring these items to the community.

SG Yes.

DM So then you decided to attach a small cost to the item to be able to send it over. But if I understand well, you had to manufacture the items yourself because the Chinese items remained in the harbour, am I right?

00:28:23

- SG No.
- DM Sorry, I missed that bit.
- SG The items have to be transported from China to Ghana by shipping.
- DM Yes, I got that.
- SG Now when it got to the Port of Ghana, you need money to clear the items from the port.
- DM That's the clearing, okay.
- SG This money, we had to look at how we could find this money because it didn't come as part of the project. At the time that we were writing the proposal, we received some kind of assurance that we could get a waiver when the items arrived at the port so that we could clear them for free, which didn't materialise because when the items came, we tried and didn't get.
- DM How many items were there?
- SG 2,000 solar home systems and 500 solar street lights. But in the island communities, we only implemented a solar home system.
- 00:29:40
- DM That's how the project was born. In your own career as the director of that unit and as an engineer, and you said you are on the technical side of things, where is the designing of the systems and now that project fitting, what were you doing before? How does it fit in your own general research project?
- SG You see, when you have energy system, I think maybe you also from the engineering background, I don't know, but the systems are made up of components, and then you have to put these components together. Now, the systems are supposed to be installed taking into account the latitude, longitude of the location, the environmental conditions and all that. When we say system design, we are looking at how we can put the components together and the behaviour of these components over some time period.
- If you have to give any specification to the Chinese Government or to the supplier, you want to give this specification in terms of the latitude, the longitude. They have their [?] system, I suppose. Because they are done in a modular form, how the inclination is supposed to be and all that. Then when the items come, you need to put the components together. Now, to put the components together, you need to have a technical background to know where you have to combine the batteries, the inverter, charge controller and all that.
- When I say we do systems engineering here, we normally are not involved in the fundamental research in terms of how to produce the PV. But we do work in how we can combine the PV with battery, or the PV with other solar systems or with other renewable energy systems like hydro and things like that. This is what we do here. As part of that project, what we did was to give the specifications so that we could put the teams together and know the behaviour of the system, and anticipate how much the system will last for and all that.

00:32:31

The discharge of the battery, how it's supposed to be. The number of days in case of no sunshine, we want a battery to run for a certain number of hours. What should be these number of hours and all that. That is basically what we...

DM You're an engineer, I'm a historian, there you go. I'm a historian who works with designers in the history of science and design, so I'm the art and social science person of that project. When you put the team together for this particular project, which was a team with whom you wanted to do some community research. Was your method to engage with the community and assess their needs and all this, did it change or was it something you had done before?

SG For this project, it changed. Because for the original project, we did not have the gender aspect on board. Daniella Sedegah was not on board. We did not have these students, the two ladies on board. All that we were doing was more the installation and training and capacity building. Once we thought that we could apply for this, we wanted to get people who could help us ask the right questions.

Who could help us come up with a much more better framework to be able to understand these gender issues and to be able to say how they can be addressed in the country and thing like that. We were very much aware of it and so we brought people on board who could help us.

00:34:42

DM You had questionnaires before, it's just that they were more focused on need and they didn't have that dimension that there might be differences or nuances attached to gender, is that it, you had studied before?

SG We had done some work on this before, but it looked at more the performance of the system in terms of the technical performance and the challenges that they have had with the usage of the system. We were not focusing on gender and things like that.

DM Then you added these two people, they brought that dimension. These two students, are they also engineers with a different sensitivity or do they come from another discipline?

SG The two students are both engineers with different interests. One of them is a renewable energy engineer but with interests in this gender issues and the interface between engineering and social science. Then the other one is also an engineer also in energy systems at the Master's level. Both of them are technical somehow but with of an inclination in this area.

DM When you say they are inclined in this area, were they bringing some training that they got somewhere else about social sciences or did they train themselves? How did they bring that in their own practice?

SG Both of them were studying in one of our programmes, sustainable energy, engineering and management, MSc and PhD. In this programme, as much as we do the technical side of engineering, we also do a bit of the social science, energy use behaviour and energy use in communities, energy and environment, energy and society. They develop their interest in the courses that they took in this

programme, so they decided to take up this research opportunity.

00:37:35

DM If I understand you well, already in your school, because you have that programme, there are people who are teaching the approaches to society and gender that you required for that project.

SG Yes, that's right.

DM May I ask, do you know who are the people who are coming to train these students and initiate them to methods of engaging with society that are more gender sensitivity? Do you have sociologists or anthropologist in your school or do you bring them from another department? How do you do that training?

SG We have a multidisciplinary team. This programme is being sponsored by the World Bank, the two programmes, the MSc programme. We look for expertise from outside the university. Sometimes they can come from as far as Australia or New Zealand to come and deliver. They come and deliver. Sometimes they come from the US, depending on the availability and their interest. We have what we call International Advisory Board. This International Advisory Board, part of their mandate is to connect us to the capacities that are out there.

00:39:17

Sometimes they also take up the challenge to come and deliver. We've had professors from New Zealand. We've had professors from other parts of Ghana. Currently, we have what we call fellows at the centre. They come from different institutions affiliated to the centre. They come and deliver for one week, two weeks and then they go back. The centre is working with the departments. This course is being run by departments and we are managing it when it comes to supporting students and all that.

In this department, we have department of energy and petroleum engineering, we have department of civil and environmental engineering, we have department of resource enterprise and entrepreneurship. We get staff from all these people departments teaching in this two programmes at the MSc level and the PhD level, and they also supervise students. That is how come Daniela is part of this supervisory team, because she is not part of the centre but she is affiliated to the centre as a fellow, so that's why we brought her on board.

DM When you say interdisciplinary, so what are the other disciplines that have been the most important beside engineering?

SG We have also people doing economics are on board. We have people doing energy markets, market people on board. Then we have people doing energy policy also on board. Then we have also energy behaviour issues also on board.

DM I don't know that discipline. Is it a psychology discipline, energy behaviour issues?

00:42:00

SG Yes, I think it's a psychology and sociology, both combined.

DM Partly that interdisciplinary work, so if I understand you well, is already set in your

institution because of the World Bank funded programme. Here's my other question. Are you following guidelines of the World Bank to put all this together or have you had some autonomy in assembling your programme? Is it really how the World Bank wants it or this is how you do sustainable energy in an interdisciplinary fashion? Or did you put your interdisciplinary stuff together and World Bank was vaguely funding?

SG I will say that, in terms of the curriculum itself, it had to go through internal accreditation, so the World Bank had no influence on that. Now, World Bank came in to support. These programmes were already existing, but they were existing on their own at a different department. The centre, it's not only the energy programme that we manage, we also manage environmental related programmes. We also manage a programme on environmental engineering management.

These programmes are all at the centre here, and the World Bank centre is managing them in terms of funds for students to do their research. In terms of funds for students to do much more detailed research. In terms of giving stipend to students for them to be able to be happy and stay and do the work. In terms of paying fees for the students, paying their school fees. This is what the World Bank is supporting. Now, they support this through what they call disbursement-linked indicators.

00:44:30

In the World Bank programme, they've got some indicators that you have to work towards based on which you get the funds. For instance, if a student publishes a paper and that student is a female, you get \$15,000 per just assembled paper. If a student publishes and that student happens to be affiliated to an external university, there's a funding that comes along with the assembled paper. If you take one student, a female, a budget for that female is different from if we take a student who is a male. They have their criteria.

If we take five females, the money that we'll get will be to support the centre's activity, will be the same as taking about 50 males. They have allocated it in this sense. The World Bank funding says that at least 30 to 40% of our students have to come from the sub-region, not just Ghana. So, then we have to make sure that we get students from the sub-region. Now, if we do not get any student from the sub-region, we'll not get any money for the students in terms of their school fees and all that.

If we want to give scholarships to, say, three Ghanaian students, we have to multiply that by a factor of three. If we take, say 12 Ghanaian students, to get the money for 12 Ghanaian students, we have to take at least four foreign students, then we get the money to be able to also pay for the Ghanaians. There are a lot of criteria, very comprehensive and broad that we are following to get what they call the disbursement-linked indicators to be able to get the funding.

DM When you say foreign, foreign is what?

00:47:04

SG Foreign means, from Nigeria, from Cameroon, from Togo, from Benin, from Senegal, from Gambia and so on and so forth. In the sub-region in West Africa.

DM That's exactly the next thing I wanted to ask you. How unique is your programme in your larger region? Is what you're doing in your institutions quite special?

SG Yes, so it's very, very special, because you see, we are training people for the sub-region. The World Bank wants us to have a standard that is quite comparable to people coming from advanced countries and studying energy and environmental issues and things like that. There's a kind of standard that the World Bank wants us to achieve, and that has got its own indicator in terms of funding. Our programmes have to undergo what we call international accreditation, for instance.

Apart from the national accreditations, we're supposed to get international accreditation. Through international accreditation, our university has to also get international accreditation, the institution itself. These are all indicators that makes the programme very unique, that makes us to be able to attract the right professors to be able to deliver. It's quite unique in that sense. Of course, we are hoping that the students that we train will get the level of competencies that they get anywhere in the world. That is what we are aiming for.

DM We've been at it for almost an hour Dr Gyamfi. Would you like to stop for ten minutes or would you like to carry on?

00:49:21

SG I think we can stop for five minutes, if that is okay.

DM That'd be fine. What about, we're back, I'll write back at, for me, it means 10:03. For you, it's probably, what is that?

SG Three minutes past two in the afternoon.

DM Okay, 2:03. Okay, let's do this. Thank you.

SG All right. Thank you, too. Bye. See you later.

DM Hi, good to see you again.

SG Yes, thank you.

DM Thank you very much. That's all very interesting. My next question was about, within this large setup where you're already thinking about questions of training women, thinking about the relationship between your engineering and society and sustainability. That programme in particular, the one that we are working on together, has it given something different from your general direction? Has it helped you think in more specific or different ways than what you're already doing a lot within this large World Bank programme?

SG Yes, it has. Because it's through this programme or project that we have broadened the scope of our study, in terms of research for what I'm doing, to include gender and women and their special needs when it comes to energy. And looking more in this social science direction, and their relationship between that and engineering. It has really given us the opportunity to look into areas where me, specifically, I wasn't looking into this, but I was more involvement in the engineering aspect.

00:58:23

It has also given us the opportunity to bring somebody like Sedegah into the programme to also contribute to the supervision of the students. Through, I think, this interdisciplinary approach will be very helpful for the students when they graduate from here.

DM What is their training, this new person that you brought?

SG The two persons, as I said, they are both engineers.

DM Those are the same people, okay.

SG The PhD student is on study leave from a different technical university doing her PhD in our programme.

DM Now we'll shift a bit and I'm going to ask you something different. How has the pandemic impacted on what you had planned to do?

SG In fact, it delayed the project implementation period a little bit. At the time that we were planning to undertake the field survey is when a lot of restrictions were put in place in terms of gathering. We were not supposed to be more than a certain number. It was initially cancelled altogether, later on the restrictions were eased a little bit. That affected the project in terms of its implementation and the timelines.

01:00:26

Also, we had to revise our budget a little bit to make provisions for COVID protocols and the tools that we will need in terms of sanitisers and nose masks and those things. It also made it, in terms of getting the enumerators, this wasn't that of a challenge, because we could provide these things for them. They were working for a fee, so it was a bit easier. I will say that COVID affected the delivery period, it affected the budget, and that has resulted in some delays in terms of the implementation. Sorry, I can't hear you.

DM You think I would be used to that by now, but I'm not. This programme that we work on together, I had a call and all this, and you talked about this. But when it started, there were some reports that you had to read, there are some... You are now in contact with Emmanuel as the regional expert, you also have a sector expert attached to you from Carlton, another engineer.

There were some workshops, two different workshops, and there will be another one in a few weeks on prototyping. There were also some possibilities to meet with other projects who worked on energy in Africa. Could you tell me from your point of view, how do you see...?

SG Sorry.

DM I'm completely okay. Do you want to stop? Are you okay?

01:02:43

SG No, it's okay. I wanted someone to shut my door for me, sorry.

DM Good. I really don't want to... I know, it's later for you to... I want to be candid if you need to stop. There are many moments and ways by which you were attached

to that programme, some workshops, some experts and all that. From your point of view, how are these...? Can you tell me the story of when and how you engaged with the programme and to what effect?

SG You see, Dominique Marshall, I'm a very busy person, so this is how we went about it. I myself had very little engagement when it comes to the systems and the structures that we put in place to help the project. Those that were involved in day-to-day in the two workshops that you put in place were the students. I joined the first day for a while, and then I left to do something else. But the students were on the project and the programmes that were designed for the whole period. It is based on that...

In fact, even the topic for the PhD students changed based on those discussions that we had online. Then the MSc student also was able to improve on the objectives that were set out in the project for her initially. I think it was very helpful. The social scientist, Daniella, also joined at some stage to be able to connect this knowledge to what is supposed to be done in this programme. That is how we went about it. I myself was not involved in the day-to-day. Of course, I have granted interviews about twice or three times.

01:05:01

DM From where you stand, who in your team or did somebody in your team have some conversations with the regional expert, Emmanuel Mutungi?

SG Yes, the PhD student. Both of them. The PhD student, most especially was the one who was doing it. Then the regional expert at one point granted interview to me after the survey, after the fieldwork together with Kerry. Is it Kerry?

DM Yes.

SG I've also been engaged. But it was more that PhD student who was [unclear].

DM What about the sector expert? Was there at one time a conversation between your PhD student and one of the engineers at Carlton or you don't know that this happened?

SG No, I don't know about this.

DM Can you just see who is the sector experts for your project?

SG It's possible that has been done.

DM Sure. That's not for you to know. Your sense, if I understand well, is the most important impact of these conversations was very early, during the first workshop when the doctoral student actually changed their project when they heard what was going on. Do you have a sense of how the project changed?

SG The project didn't change, it's just the topics. Initially, it was the topic for the PhD student was sustaining rural electrification in Ghana, a model for remote monitoring of mini grids in island communities. Then this topic was changed to an intersessional study of gender and the productive use of electricity in lakeside and island communities along the Volta Lake. It's the same idea, but to make it look and follow the objectives of the programme. The same applies to the MSc student.

01:07:27

DM Then, at the end of this programme, R1, there will be a virtual exhibit, and we're planning all that with everyone. We're designing this as the projects go along. At your end, where you sit, have you got any expectations for this exhibit, or you're not thinking about this yet?

SG It will be good if you can showcase our project and our university, as in, it has to be out there. It will be good if you can also showcase this community that needs to have some videos footages or even pictures of these communities, and now they've been assisted. I think, yes, we are expecting those things to be there so that at least we get our university name out there, and my name as well as the principal investigator.

DM Now, this is the last bit of what we'd like to talk to you about is, so now we have another year to go for all the, there's 20 of these projects to finish and to prepare the exhibit and to make, as you say, all these adventures visible. Then from our end, we have no yet immediate plan of doing something else as far as we receive that funding and we help support these teams. We close the project down. We do the virtual exhibit. We make sure that all the teams are fine and then that's the end of the adventure.

01:09:36

But there's so many people involved everywhere thinking about carrying some of that through, but we don't know yet what. So, I wanted to take the opportunity of this conversation with you to think with you about possible sequels of this adventure, either at your scale in your institution with not us involved. Or maybe ways by which the small partnerships that were formed over the last two years might be sustained or transformed or supported. If you could dream of interesting follow-up to all of this, what would be your wishes?

SG That is a very, very good question. My dream is to have this project sustained and to be able to use the information that we get from these island communities to be able to influence policy. We would need continuous guidance in terms of how this can be reflected at the national policy level. If you could continue with engagement and see how this still does more will reflect in the way policy is designed in Ghana for these communities, and how they could benefit from the government energy access strategy strategies.

How they could have a say in what gets done at the national level. This would need special competencies and skills, which I'm sure we can achieve together in this collaboration. That is one. Second things is, we as a centre may want to continue to take up this part of research gender design as part of our research teams, if possible, and we will need continuous guidance and collaboration at least to develop it and sustain it. These are things that we would need. We are writing proposals from time to time to try and win projects.

01:12:49

Now, when it comes to any project that would involve this aspect of energy in terms of social behaviour, gender and things like that, we may want to have collaboration with Carlton, if possible, so that we will have a much better strength to be able to

meet. Then with time, maybe we can have professors from your place coming to us to give a course or give a talk seminar. It could be online also. These are things that we hope we should sustain and build up on.

DM Thank you for that. Two things I want to say. First of all is that the learning goes both ways. Because where we are for our students, research assistants and our colleagues who are in their own interdisciplinary team to see how you're working and your PhD student is working is very interesting. We should also be able to bring some of your people over virtually or not to speak to our students about the kinds of methods they developed to talk about to remote communities in very specific settings so that the learning is mutual.

We can't promise anything, we're just looking around. Because that programme was very exploratory and in a way, it was a way to see what there is, so slowly to identify places like yours who are already on that trajectory, and see how a bit of resources would go to see where these things could progress. How we report to the International Development Research Council will include suggestions like yours of further partnerships and things. After that it's not completely in our hand, but we can make the best possible case.

01:15:18

Like you, there is a selfish interest for Carlton, because as I told you, these partnerships help us as well training our students and thinking about engineering and science and their relationship with social science in better ways. Second thing is more selfish, is because I'm a historian and I'm currently training a doctoral student in the history of environmental regulation of mining in Ghana before the English, like before, before traditional ways of sustaining mining to now.

I was wondering if, and that completely selfish, in your institution or around you, there are historians of mining or historians of engineering or anthropologists to do actually think along these lines? So, this is not something you know about?

SG No, this is not something I know about, but it's something that I can find out if there is and where they are in the country. We have a mining company close by [overtalking] you are aware of that, Newmont Mines. It's just about 50 minutes' drive from the university.

DM How do you spell that?

SG Newmont.

DM N I M O N T?

SG N E W M O N T, Newmont.

DM Newmont, okay. Where is that company from?

01:17:05

SG Newmont, I think it's an Australian company.

DM Do you know if it's an old one? Have they been there forever?

SG Newmont has been here for some time. I don't know when they started.

DM Don't do nothing at all. I'll bother you later by email if it becomes interesting. But the other thing I like about what you said, and maybe that's number three is, how really your whole thinking is about training, how, in a way, at this end, the project was also like this. When IDRC said, would you manage this? You said, why would we manage the project? You manage projects. We do our research, but project management is not... Why would you do this and why would we do this?

When we became interested is when we started to think about this as an opportunity to train our own graduate students and to give them some opportunity to meet and to network and to understand what was going on in other places. In a way, our thinking here is a lot like yours, how are PhDs, MAs, that gives an opportunity to enhance and diversify their skills and meet experts that will support their endeavours. In many ways, our ambitions are converging in ways that I find very interesting.

Is there anything else after this hour and a half you would like to say about this adventure that might be interesting, things that you've understood or that you would like to convey, do you think that I've exhausted all what you have to say?

01:19:08

SG I think it's okay. We just like to thank you and your university for the opportunity for us to be involved in this project. We are learning new things every day. It's an opportunity for me to see how we can communicate and collaborate and solve existing problems. It's a privilege to be part of the programme, so we thank you very much and your team. If we need any assistance or if anything comes up that we need much more clarification, I think we will let you know through Kerry or maybe through you straightaway.

DM Good. As I said, the pleasure is completely neutral. Also, please make sure that a member of your team tries to come to the next workshop, it's a workshop on prototyping. It would be marvellous if one of you was there, even if your stream was not the prototyping, but the case study one, a lot of what you were talking about today, thinking of other questionnaires is also a form of prototyping.

It would be marvellous to have one of you there in the coming few weeks for that workshop on prototyping. It's at the end of October. We send the publicity there, and probably your doctoral student is aware of this. But please encourage somebody to come over. Okay, thank you so very much, Dr Gyamfi, and I hope you have a good rest of your day and that we meet again. Take good care. Bye-bye.

SG Thank you. Bye.

01:21:09



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ID80 - Reimagining urban territories for women's autonomy in Colombia

Interview transcript

Interviewee:

Adriana María Botero Vélez | Principal Investigator
Universidad de Bogotá Jorge Tadeo Lozano (UTADEO)

Interviewer:

Ona Bantjes-Rafols | GDS Research Assistant Coordinator
Carleton University

Date of interview:

28 October 2021

Transcribed by:

Vanan Online Services, Inc.

ID80 - Reimagining urban territories for women's autonomy in Colombia

Interviewer: **Ona Bantjes-Rafols**

Respondent: **Adriana María Botero Vélez**

Interviewer: [00:00:00] Perfect. I want to start with a very broad question. Could you explain the story of your project? You can talk as much as you want.

Respondent: Ok. Right. Well, in the beginning in Tadeo, some of the art and design professors of the college of arts and design were developing a project in Casa B, in the neighborhood of Belen, related to permaculture and urban vegetable gardens as a way of thinking about autonomous territory design. That was the gist of the project. And then there was a call from the University of Carleton. We met a group of women in the Belen neighborhood and we thought that we could work with them. They had been consolidating formally as a circle of woman social leaders that push for community processes, prepare community food and organize fundraising events to help the neighborhood in several aspects. And they organize women meetings for women to reflect on our role as women in society and specifically in this neighborhood. This is a working-class neighborhood, the second neighborhood that was established in Bogota, one of the oldest neighborhoods. It attracts people from other cities that were displaced and are looking for new opportunities or forced to flee violence. We started in 2019 when the pandemic hadn't taken place yet. In November we had the first meeting. We told them: what do we do? They had been dreaming of building a kitchen for ten years. You're going to see in the documentary movie that we're making the harsh conditions in which they work. The filming process was very hard. I'll talk to you about it later. They wanted that kitchen because that space would help them be more independent. Especially because many of them are heads of their households and were very affected by the pandemic in all respects, especially their income was affected. It was very, very hard. So we started thinking, we drafted a proposal and we prepared to win this. Without knowing much we started to work from that moment as if we had won it. We enlisted the help of several design workshops in Tadeo, we involved them in our work with the women of the neighborhood and several students made critical mapping, and social cartographies detailing women's issues. When we got notice, I don't remember the month, but I think it was in June, we started to work steadily every 8 days. We had meetings. Of course, the pandemic had already started, but we started to work without a contract or anything. We started to work. The first phase was a collective conceptualization. But I think that the basis for the project is searching a process of decolonizing design. We try to get rid of certainty, of the idea that there's only one way to do things, of thinking that you need a very strict plan that women have to follow and we did the opposite. We searched for an alternative of a non-colonial paradigm, a more independent perspective to manage and realize this project. That's how we started and it's very similar to how there are many branches of feminism. I think the point of view that guides us the most is community feminism. I think it's a very Latin American mindset too. We are not looking for political participation in traditional political spaces; we are fostering horizontal power, and how these horizontal power

practices will create alternatives to patriarchy as a society. Patriarchy rules over us and always wants to impose one way to view the world and a single way to think and make design. I think we will focus on concepts in detail later, but we've had difficulties that have allowed us to learn and reflect about how design decolonizing and anti-patriarchal actually means. [00:06:26] For example, the struggle between technical requirements of construction and cooking. At first, we wanted some kind of kitchen-workshop, an informal alternative that matches closely the spirit of these women. These women wanted a long-term solution, a kitchen that would not only improve their environment but also allow them to make a living by using their skills. Many of them know about cooking or have other skills, one of them designs or makes soap and that's how she makes a living and supports her family. Another one makes arepas. Do you know arepas? She has to cook in the street in very harsh conditions. And that made us reflect on the political implications of this project, from a personal point of view and trying to make sense of market logic. Women need to survive. We strived to create a kitchen that follows all the rules so that they can cook and sell their products without issues and to let people into the kitchen. And this made the process very complex because we are no longer responsible for their empowerment and control. We have to get permission from a public institution, and the structure of the kitchen is limited by these technical rules. So I think there many interesting learning and reflections, and we had many challenges to manage and plan this endeavor. I don't know if you want that many details.

Interviewer: Yes, give me as many details as you want.

Respondent: Okay. I think this is a very big project. Tadeo University works in Colombian pesos, just so you can get an idea of the kind of research projects that are financed by Tadeo resources. Our maximum budget is 20 million Colombian pesos. In Colombian pesos, the project is about 100 million Colombian pesos. It's a really big project. And it presents an additional challenge in terms of management and design, because it combines several subjects. I studied communications, I teach design but my degree is in Social Communication. We have designers. We have an historian that unfortunately had to leave the project. We have architects. We have a group of members of the community that don't have any degrees. We had too many things going on and so we tried to split the project in three core areas of action, but it was a creation process. We structured the experience as a transversal research methodology that allowed us to build new knowledge. We'll talk about this later. We'll also cover communications as a way of maintaining a bond with the neighborhood while we try to expand our reach in platforms such as social media and others. What are we talking about when we talk about deconstructing the patriarchy? We have three action axes. We divide the 30 of us in teams and we start to work as a parallel operation, allowing each team to make strides within their own work. We structured experiences. It's not a well-known methodology in other places, I don't know if you have heard of it. I studied it while I was an undergrad. Sorry, while getting my master's degree. It's related to popular education. Several Colombian sociologists and philosophers started to do work related to the theories of a Colombian sociologist that was also the founder of the Sociology College at National University of Colombia, the biggest public university in the country. His name is Orlando Fals Borda

and he follows the concept of applied research. He developed a whole dissertation in which he discusses the political implications of building knowledge and community research. Orlando Fals Borda in [00:12:42] participatory action research in education proposes that knowledge is built by social relationships, that collective investigation is a political act that fosters transformation instead of only creating articles for a journal. It creates movement in communities. This is related to the logic of research methodology. Popular education is similar to Jesuit work on liberation theology, which went against what the Catholic Church proposed with evangelizing. Liberation theology searched for a moral and spiritual discourse that was more connected to people's lives. They also had to liberate people from the oppressive concepts of colonialism, which was such a rough process. So popular educators started to create this method called structuring experiences, taking note of the knowledge that was created in the cocalero movement and the community in Cauca. What? Don't they have an influence? Don't they create knowledge? Don't they influence academia? Why wouldn't it be at the same level that political philosophy theories or liberal democrat concepts? Then they start to think, "We are going to prioritize a diversity of viewpoints but we'll recognize popular practices". They study how people organize, how they resist, what their opinions on certain topics are, always thinking about it in a subjective way that pushes us to think how society could be different. So we can build society in that sense. Sorry, I was closing WhatsApp. The notifications are very annoying. In that sense, we started to think about the creative process. Because we were building a prototype. But also structuring implies to look beyond what people tell you and your perceptions or photography surveys, but we have a lot of practice, a lot of action, a lot of meetings, a lot of discussion, a lot of achieving and materializing what we do, for example our first... well, I'm talking about this later. It's a delicious challenge. Structuring involves the participants of a process, who don't need any knowledge in particular. That was our first decision. And together with the creative process, we are going to analyze this experience to see what we can learn from it, and what we can reflect on. All of us, not only the women. It was beautiful to realize slowly that the point of view of community feminism resonated with us, and that kick started the most important lessons from our project. On one hand, most of Anglo-Saxon and European feminism is focused on the State, consolidating women's power in the political sphere. It connects politics with the public sphere. They recognize the importance of independence and political power of women. Whereas community feminism in Latin America, specifically Aymara and Ecuadorian sociologists highlight that power is also present on the private sphere. We don't want to become violent, dominant or successful as men. No! We have to recognize the value and the political weight of housework, of childcare and how we change the patriarchal logic that permeates these intimate spaces. And obviously the kitchen, as a community space can be a lab that gives us clues about what actions we can take. And women are comfortable there. And there's a beautiful lesson in all of this. Community feminism is much influenced by ancestral communities and the indigenous people of Latin America. They don't have a binary system that divides men and women, masculine and feminine. They focus on the interrelation and the shared responsibility of life. So their idea is: "We don't want to start a war with men. We don't want to add fuel to the fire and try to impose ourselves by violence. Masculinity and femininity are a

human dimension with [00:20:00] specific traits that have been culturally established. But we're also trying to unravel what culturally and historically has been designated as feminine or not. Because this involves a discussion on women's bodies, clothes, careers, which was a huge part of feminist studies at their beginnings. Why would women be suited for some things and men for others? I think that if community feminism understands femininity as a dimension of human nature, it will extend the same consideration to masculinity. Or men, not masculinity. Men can also reclaim their right to be emotional, to be fragile, to be caring, and to be sensitive. Because they are. And in this westernized society with a binary thought they say: "No, men do this and women do that." But it's not like that in daily life and in real life. I think these are some of the concepts I can summarize that I think are very beautiful about this project.

Interviewer: And how does going to the community and working with these women influence your thoughts on community feminism? How did you find this practice or ideas?

Respondent: Do you know the project Miro, no? We started with collective conceptualization. We said that we weren't interested in following any ideology. We want to know what independence and empowerment are to Ona, Chata, Liliana, Fedu Gutiérrez, or Angelica. We don't want a definition from an encyclopedia or a theory, we want practical examples. What are those things? How do you experience them? So we started to work on the concept. I can show you the recording of the meeting if you want. We wanted to connect the concept to your experiences and illustrate it with an image. Then we got very subjective answers. When we started to talk about independence we had many perspectives that nourished each other. Some definitions were naïve, or too spontaneous. Like, "independence is doing whatever I want in any space". But other answers were more complex. They linked independence with producing food, for example. So we added layers upon layers of complexity. We can't follow anti colonial logic. There can't be only one idea of the world because there are many worlds. It's not a world made by many worlds because it turns out to be the same world. Each notion added to this intricate weaving. We talked about independence, femininity, love because feelings, affection and love were always in mind. It was very funny because one professor was very critical of these concepts. He says all these concepts are manipulated by the market. People have gone to war in the name of love and religion. It was very interesting contrasting this point of view with the ideas of women, because a lot of the time we still idealize these concepts. There was conflict and tension, and it was powerful. And there were also many different points of view when we talked about femininity. One of the women had just had her third child and she linked femininity with motherhood and nurturing. Me, I'm very passionate about... I would like to be a shaman. That's what I would really like to do with my life. And I want to get in touch with my motherly wisdom and I've done workshops on that. I like the idea of femininity as the cyclical part of life, as the nature of life itself. Anyway. There were many unique perspectives and we started to reflect on them. Angelica has studied feminist theory and she talked to us about the timeline of feminist thought, we had a conversation with her [00:26:08] in which she guided us through all the different feminist schools and we started to relate to community

feminism. And this was reflected in our work at the Aisha women's circle. We saw many similarities between the ideas of community feminism and what women were doing. So we started to figure out that our goal was to reimagine femininity. We want to be empowered in our bodies and in physical spaces, so we started to think that to deconstruct patriarchy we have to redesign the idea of femininity. And that was the path we took.

Interviewer: Well, talking about the importance of community, maybe you could say how you define local community in this project.

Respondent: How do we define community? Okay. Well, I think we also have an idealized idea of community, "a group of people that work towards the same goal". It's too romanticized. Because I really think that community is space of conflict and tension. And we experience this when we go to work. Maybe there was some problem with schedules and this triggered a fight. We define community as the place in which we weave, but not by consensus. No. Particularly in Colombia there has been a civil war for over 70 years, and conflict is part of our lives. Conflict is within us. We have major issues. Conflict is part of life. Conflict isn't the problem. The problem is how we tackle these conflicts and there patriarchal, colonial logic show up again. Things can't only be the way you want. There isn't just one correct way of living in a community. What we found out in this process is that the community is a lab full of tensions and subjective thoughts that can be used to create. But we have to respect subjectivity. Its respect of "live and let live," not only "you have to tolerate difference". People say that but they don't mean it. When I meet someone that's different from me, I should stop trying to see myself in them so I can really see them. I think a sense of community is linked to communal independence. The community has to find its own way to work. We have to respect the way in which communities organize themselves and occupy spaces, make plans, and drive processes. We have to identify all that but let them live. That is one way to look at communities.

Interviewer: Thank you. I want to go back to something you mentioned before, regarding the different subjects in this project, such as communications, history, design and all that. I want to know if I understood well. Is the relationship between the subjects different than when the project started?

Respondent: I think... there are two very interesting implications for your question. I think from the point of view of industrial design in Tadeo, in the last 8 or 9 years they have thought of design as something in the border, very connected to social processes. I think that as a researcher sometimes you find out that in social processes there isn't a clear line dividing subjects. I think design can break these barriers. Because design creates, it doesn't just analyze. For example, historians work with archives and are much stricter. We see hegemony in the logic of these disciplines. We are a big group and many of us want to break these barriers. And there was the second part, not only in terms of the fields of thought or the disciplines. They are all different, but also in terms [00:33:15] of the actors and sectors. I don't know how to say it, of the areas. In other words, how educational and formation is there in a community practice so that they are not sitting in a classroom all day, and receiving a cardboard at the end, but that also invited us to think, "How do we that design is also thought beyond the workshop." It's the workshop, the

prototype, the wood, the materials... no. Like life itself, this community place is a laboratory of design, that allows us, I insist, to think of ourselves beyond the fact that you studied history and I studied communication and another person studied economy, but that this returns to us and finds us. So I think that the project has allowed us -- what we were naming from the abstract before, this project allows us to ground it in practice. Specifically, how is this done and what are the difficulties of that? To give you an example, when we start these dialogues, and then -- we call her Chata because she is a woman from the circle who is a midwife who pushes anything. She is impressive. She heard us talk and heard Angelica or Alfredo speak, for example. "No, uncertainty, autonomy, and anti-colonialism..." And she stopped us for a moment in a conversation and told us, "Look teachers: what a shame with you. Well, I don't understand you at all. I don't understand you at all and less here. Look, what you have to do is come to the neighborhood, experience a *sancochada*, and here you are going to see all that you speak with the words that I do not understand. They are going to see how that really happens." And I think that was a milestone for the project because of course, we all said: "Wow. Now let's really turn around because that's what we're trying not to fall into, what we're trying to deconstruct is what we're doing. So come on!" And then there was also a turn. Well, the pandemic has not helped at all. So far I am feeling I am really doing community work. Before we had a meeting there or here, two or three months and I had never had to do community work via Meet and Miro. What a difficult thing!

Interviewer: But this created anyway a base for the activities in the center, right?

Respondent: Yes, if we had stood waiting to see what we could do we wouldn't have accomplished anything, and we've been in a hurry too. Especially concerning the construction laws, I'm worried about how long it could take, I told you the previous time. But that's an operational problem. We'll see if the international center allows us to expand the space.

Interviewer: Wait. I wanted to know too if there are also other intersections related to gender like class, generational issues and if these topics have come up and been part of the focus of the project.

Respondent: Yes, absolutely, I think intersectionality in general has been a mainstay topic. It's evidenced in class, race and gender but also, how would you say it? The educational level. That's what I'm telling you. Many of these professors had never done community work. And they had never wondered about the patriarchy and women's place in society. It's their first time seeing these issues from this perspective and there's much reflection to be had, to apply these concepts to concrete examples. But one of these topics has been at the forefront. What can we do? We're never going to be in the [00:38:54] same conditions. But how do we create the conditions or create a space, an environment in which people feel like equals? So many teachers had to use less theory, listen and learn. I think it's a great change, instead of pretending you know everything and listening and learning. Even if not everything is related to intersectionality it can be a beautiful place to reflect. On the other side, regarding race, as this is a women's circle. Women have connected with each other by means of rituals, rituals as a way of political activism, to

resist patriarchy. As an example, when they designed their own logo, Aisha's logo, that represents them as women, you start to see mystical concepts appear. See, this is the logo. It has phoenix wings, you can't see it that well, my camera is not so good. But you start to see this concept of mysticism and non-human creatures. When we started to think about the design of this image to identify us, the first thing we did was a ritual in which we met to perceive space. We don't perceive with our intellect or logic, "here is a beam and there's a..." No! We need to perceive what a space tells us in our skin, the aromas, the things I feel and perceive. So those rituals came with a beautiful speech about the four elements: sky, earth, fire and air, forming this idea of complements, and love in the center as they say. So if we try to think with this logic, and not imposing things, as if we were letting a plant grow in the garden. It sounds very romantic and for some people it could be too esoteric and mystic, but it's the daily mindset of these women. Like if they see a dog on the street, they know they have to respect it and care for this creature. Abandoning the concept of humans as the dominant species. We can build from there too. In terms of feelings, aesthetics as a way of knowledge attained through feelings. It's not reason; it isn't combining the teachings of Rita Segato and Judith Butler. No! It comes from a neutral place, not only rational, also sounds. To create prototypes sound was crucial. It's another sense. And my students teach me things. Sometimes, I don't know if it's my age or what, you have impulses to use your senses. I'm researching music so sound is vital to me, but I hadn't integrated it with this project. And my students asked me why we didn't do the workshop with sound instead of image. So we started a second workshop and analyzed the first one. In the first one we did collages. But then we analyzed form, color and texture rationally. We missed gossip, laughter, mutual understanding. So in the second workshop, we analyzed the visual collage and we called it the sound of roots, something like that. We only listened. We prioritized laughter. It was like opening a new universe beyond my imagination, so beautiful. Then intersectionality appeared with that logic, like State vs. community. We are seeing it with the kitchen. We have to file documents. We can't build an open kitchen like we wanted to because the rules say it has to be closed. We have very interesting conclusions for our final paper. We'll see how this unravels with equity.

Interviewer: There's a lot to explain.

Respondent: Yes, a lot.

Interviewer: Do you want to talk more about...? Well, you mentioned the obstacles that the pandemic brought. Talk a little about it and explain how you solved these problems.

Respondent: [00:46:23] Well, I think that we've had a lot of perspectives for this specific project, to materialize the kitchen as the main component of this project that has been very complicated. Because all we did in Miro, we worked on it, we took advantage of virtual spaces to plan and make prototypes and that was a great opportunity. On the other hand, as an opportunity and an advantage, we have the talking circles we organized. We couldn't have done them without the pandemic because who knows if it would have occurred to us. Before we mostly did things in person. This allowed us to have Griselda from Argentina and Raquel in a circle, sharing with other women and among ourselves

and talking about it. We met with women from Mexico and one from New Zealand. And that has benefited our thought and our practices. It's also a talking circle because we don't want to be told how things are by an authority. We want to talk as equals and share experiences and knowledge. I think this has been a very interesting opportunity during the pandemic. We probably wouldn't have organized it in other circumstances. Miro was crucial for this, otherwise we would have printed 20 000 flyers for an event. Now we've integrated into the neighborhood, we're doing mingas, as you saw in your Miro. A minga was how the indigenous people worked; I think you know more about it than me, no? It was their way of working. By families, for example the Botero family would go one weekend to Ona's [interviewer] family home to work. Bantjes. We would all go to work on your family's estate, to sow, to harvest, to pull weeds. We would build community that way and 8 days later your family or community would come to mine, to work on my land. That's how mingas work. It's an exchange of knowledge; you can see it's a very different logic from capitalism. You don't get paid for going, there's an exchange of knowledge, of time, and it creates bonds. That's the significance of it. Then we started to do mingas but during the pandemic you could imagine how it was. "No, we can't organize a minga because there's going to be a second lockdown. We're not going to be able to go out." Let's say that the most difficult part was learning how the neighborhood was organized, the divisions, the hardships of those women. Those things help us understand the decisions they make. Why they insisted when the permit to build was delayed for whatever reason. Then we said, "No, let's just make the kitchen here." And they said, "no, you can't build it here because people will come," and I didn't understand until we organized La Luna. That was the launch of our feminzine, that's what we call it, because we say it has an identity crisis. That's another funny thing about the project, we were calling it a bulletin but I said no, a bulletin is something else, a very journalistic affair and this is a very poetic, it has businesses listed and women's stories, it's something else. Then we said it could be a fanzine, a non-professional publication, and then we called it a feminzine. It's our thing. It's a feminzine. We don't call it fanzine or bulletin. It's a feminzine. The pandemic has been very complex, but also very interesting. I'm sad I couldn't go to Canada to meet you, though.

Interviewer: [00:52:59] Yes, I wish the team could meet in person. Since we're talking about that, about meeting in person, we can talk a little about our project participating in the Gendered Design in STEAM Project and talk about how it has helped your project or not.

Respondent: No, of course it has helped us. The first thing I would point out is the knowledge exchange. We get to know what women in Asia and Africa are doing, I understand about half of it but I make an effort, believe me. But getting to know their perspective, I feel that they are very collaborative, they want to build with us. At first, I think most people expected to be questioned like "okay, tell me what's gender design". What's that again? But Gender Design has been open to learn and build with all of us. And some will say "why don't they just tell us what Gender Design is?" But I think exchanging information has been very important. For example, I remember a meeting we

had with... Wow, I think I forgot the name. What was the name of our regional expert? Not Raquel but...

Interviewer: The sector expert?

Respondent: Yes, her.

Interviewer: Jill.

Respondent: Her. Yes. We had a meeting once in the neighborhood, I could show them the place and it was a nice exchange of points of view, there were so many different perspectives. For example, I thought the Mexican project was very sensible and restrained and focused. We have to ask if we can do digital ethnographies. But we don't want to be told how to do anything; we want to be free and have a diversity of thought, seeing different sides. It's interesting that we're doing this but we have to keep an eye on other things. Conversations in Latin America are particularly interesting. We can also analyze the difficulties, and we have to be critical always. I want more criticism and deeper thoughts but online channels don't foster this. Also in my case language is an obstacle. Could you imagine me trying to explain these things in English? No, it would be an embarrassment. I think I could cry for not knowing how to speak English. But I think it was very productive. We shared dialogue and experiences, it was very interesting.

Interviewer: And what was your experience with the regional expert, Raquel?

Respondent: I interacted with Raquel in two regional events, and I thought they were very useful. Now in November we have another one, because it's also been an opportunity more in our own languages. It's a mix because they speak Portuguese and we speak Spanish. But it has also been... we could share specific bibliography, specific perspectives, ethnography, structuring experiences, I could talk to them in depth, and we shared literature. And Raquel has always been very attentive, not only academically but also in an administrative way. She is the sweetest, we get along well and it has been great having their perspectives, and there's also so much variety. Some are experts on [00:58:29] architecture, others on the creative process, and she's also given us pointers to see how we could do things. She's been very interesting to work with.

Interviewer: Do you think it was good to group projects by region?

Respondent: Yes, I think it made things easier. I don't think you can avoid or replace some things. It's been nice. We all met together at first and then we gathered by regions. It would be nice now with the prototype, sadly my hours are complicated. And I was getting lost again. If you told me to meet you at 10 I could think the meeting was at 11. It was crazy. But Google Calendar helps me with my schedule. I would like to see them again and exchange information with Africa and Asia; their perspectives are so different, so unique, beautiful. There are a lot of things we can learn and share. We should meet again. Stream 1 and Stream 2 is also interesting. I've been wondering about the difficulties we've had to finish the kitchen, I've been wondering about the person that helped with the prototype, what was his name?

Interviewer: Bjarki.

Respondent: Bjarki, sorry. That name... first time in my life I've heard it. So we saw with Bjarki that the prototype didn't exactly match the appliances. I think... I wonder if the design practices are so focused in the logic of the creation instead of a description of reality. I would like to see it. I'm intrigued by the people that didn't make a prototype. How did they approach it? How do they see the creative process? Do they understand knowledge as a creative process? I think you can draw powerful conclusions by sharing methods and reflections, seeing the description, knowing if there were any limits or these limits were blurred or if it was a super interesting aspect of the program and they can't talk about it. It would be very nice to meet again and compare research with research and creation. It was beautiful.

Interviewer: Have you... maybe interacted... have you had a chance to connect with projects from other regions?

Respondent: I'm not sure about projects, but we invited Griselda to the first talking circle, that was focused on talking about deconstructing the patriarchy. She shared her perspective with us, from an architectonic and spatial point of view, and that gave us many clues. I think we would have wanted more dialogue, especially with some people. The breast implant project was very specific and harder to connect with other things, but in our next meeting in November we'll talk and it would be great to talk when we meet in Latin America, organizing a more comprehensive event that can end in a publication. So that we can keep nurturing each other, deepening our bonds, making stronger networks.

Interviewer: And about LAB1 and LAB2, the conferences of the program? Did they help your project in some way?

Respondent: Yes, absolutely. I'm a communicator and a design professor, I learned about design in real life, so I had to read a lot. But I've learnt by practicing. But it's not [01:04:37] so easy. For example, Alfredo as a member of the team has studied gender but not in relation to design. Angelica knows about feminism and gender studies but not about design. And seeing these perspectives that they shared at the beginning at those conferences made us aware of things that didn't allow us to talk. Design and the gender lens are vital to me. A woman talked about the history of technology and women in technology. An African woman, I don't remember her name. But it also was very revealing because we're constantly thinking about those things, about the big aspects but all of you have helped me notice the little details that are more common than what you would think. It helped us a lot to find more common ground between those two subjects.

Interviewer: And the project bulletin has been useful or has helped you in some way?

Respondent: We could read it and see what's happening in more depth. I think I could have a session on the labs with the articles, also as a pretext to analyze what others have done. I think when you receive those bulletins, the first thing you do is search for your own project. "Where is number 80?" And you pay the most attention to that, but I think

it would be good, is an exercise we could do, read the four issues. There are four, no? The fifth hasn't come out yet.

Interviewer: No, it will come out soon.

Respondent: We could read those four issues in full and see opportunities in other projects. It's written there and everybody can see it. We haven't been able to have full attendance in our sessions. We have to take care of this. It's a gathering place, this bulletin you make. It allows us to keep an eye on things; I think we could make more use of it, not only see our articles but read what other people are doing. I think I'm going to organize a conference with the team, to read everything and see what we can learn from the other projects. Great, I'll do it.

Interviewer: I want to talk a little bit about the future. What is the next stage for this project and how do you think this project will evolve in the future?

Respondent: I think that in this particular case in our project let's say the dimension that we are giving to the kitchen. I think this won't end here. We're only beginning. The complex nature of building the kitchen and the time and money we could get working with you let us plan phases for this project. This makes de Tadeo-Casa B-women-neighborhood relationship a long term one. We are going to achieve very important things with you, but we have to keep working to reach the end of the road, to conclude our political project of anti-patriarchal design, deconstructing the patriarchy. What comes next? This year we finished the community orchard. I would like to at least have a cement platform in the kitchen. If you see the documentary, we filmed for a whole day, from 7 am to 5 pm. It rained the whole day and the women cooked, at this moment we still have no appliances, but we have a kitchen in a political and ritualistic way. The women cooked. Have you seen the pictures? It was on top of a fire and some stones. That day it was raining and they had to take breaks from preparing the food to go make [01:10:42] holes in the ground so that it wouldn't flood and put out the fire. I would like to leave a slab of cement in the kitchen so that space can start to take shape. I would do many more things if I didn't have to deal with the permits. I told them so and is one of the issues you're going to see in the article we're writing. I have more of an anarchist outlook but I understand the women's perspective. They don't want any issues with the kitchen. We have to follow the rules. But I think there's an interesting discussion to be had. What would have happened if we'd just done it, obviously following safety and technical guidelines? Being more specific I think we're going to issue our second feminzine on November 25th, the International Day for the Elimination of Violence against Women. This publication gives general information about the Aisha circle and how we met. I'm going to show it to you; I'll send you the digital copy very soon. We have the women's story, it's called "La barca", and they narrate how they got in. It's very poetic, it's about the hardships they experienced and all that. This text is called "The academia in search of its own core reason" and we recount how we met the women and how we got involved in this project. Besides, we are the only project from Colombia that obtained this grant. We also have the first definitions of independence as a concept. The next issue will cover femininity. We also have "stories from the neighborhood", some of the people that live

there talk about the project, what they think about its future, the community vegetable garden, how can they as a community improve the neighborhood. Here we listed some small businesses ran by women from the neighborhood, so they can be contacted, and the flag of everyone that participated. And this is an image that we created in a workshop with the women, an “exquisite corpse” (a method by which a collection of words or images is collectively assembled). And this is just a piece. When you collect the six issues you can get the full picture and you get a great collage. Now on November 25th we’re going to march and host a talk on the International Day for the Elimination of Violence against Women, how it manifests, how to respond and resist. After we do that I hope we can install the slab of cement, it’s sorely needed, so we can start with the furniture or the walls. And next year we will continue construction, of course. There’s a main focus in every one of these issues as you have seen, a community meeting, a march, a night party. But there’s also a conversation, a more academic piece you could say, about the topics we’re addressing. For example we’re now trying to arrange a talking circle with several feminists and two Aymara sociologists, sorry, a Mexican, a Bolivian and an Argentinian, to focus on this perspective. And we recorded the first part of the documentary we called Apron Philosophy that focuses on women’s logic. As Rita Segato says, women philosophize while they beat eggs. You don’t have to be a scholar studying Hegel to philosophize. We already have the first recording and the idea is seeing the first cut. This documentary is going to narrate the process to transform the space so we can show the complexity of the issue and how this will improve these women’s lives. So that’s what’s coming, we’re finishing structuring and writing the reflexive article.

Interviewer: What would help you reach these next stages, these ideas for the future?

Respondent: [01:17:04] In one of the meetings we had with the Latin American teams, Ana Falu, an architect, asked me what kind of blueprints we were making and I said “what?” I’m not an architect. I still have doubts, I invited her to the last talking circle so she could tell us a little about it but she couldn’t attend, she was in another country. But I think that if we had more session in which we could exchange more specific knowledge, this could improve our conclusions on academic articles. If I could I would have finished that kitchen but we had to get a permit. We filed de application now in October, actually the last week of September. And it should take a few days more. I’m very stressed about it. They told us that we had to start paying and we haven’t finished the kitchen yet. I would like some more time. I don’t know if everyone that worked on the prototypes with me during the pandemic feels the same or if only we had these problems. I’d like to have more time. Because I couldn’t go to Canada I would love for you and Dominique and Chiara to visit us here, so you can get to know the project and see what we see. That would be so great to strengthen our relationship, I think we should try to maintain our bond, via social media, working on different programs and connecting our universities to see what else we can achieve. For example, a program with a double major from several points of view but a specific focus would be very powerful. Another research. I don’t know. There are so many things that could be done.

Interviewer: I would love to go to Colombia.

Respondent: Welcome. Even if they don't send you here for the project you can come anytime. My house is your house.

Interviewer: Thank you very much. What things are important to maintain a project long-term?

Respondent: What a question. There are so many things involved. I'm going to say something, I don't know if it will sound... I don't know how people will take it, but I'm going to say it anyway. I think there are different motivations to study these topics between universities like Carleton and Tadeo. I have to say it but I don't know how it will sound... the governing board is almost all men. Department heads are also mostly men. Like in Argentina, this is a very delicate issue in Colombia. Equal participation and gender equality are really fragile, and this is very true in universities. I don't know how much support there is for this project at my university, I wonder if when you leave we can sustain it. These days vice rectors are very considerate, but maybe it's because I have your backing, I don't know if it will be the same in the future. I think there are important issues in institutional management and politics. I think your role is fundamental to secure these projects. I really mean it. It's a huge help, a great push. I think it's really worth it and I wonder how necessary it is. Of course, we should continue this project even if we have no backing. I'm telling you, this is just my opinion, I don't really know. I think this is a fundamental issue. On the other hand, I've been wondering. I don't think what happens here happens in Canada or the United States. We professors are overburdened. We teach, we research, we create, we do administrative tasks. From what I've talked with my colleagues in Latin America, here [01:23:29] universities have to become less patriarchal in that sense. Administrative procedures at the university are very complex, and even though us professors want to build knowledge or do research we have to spend a lot of time doing paperwork. I'm supposed to be the main researcher and only have time to write and reflect in my free time, weeknights or weekends instead of being with my family. I think you need a lot of willpower to create the conditions you need to keep thinking from this perspective. And also, you need resources. Not only economic, but also, for example, Dominique's wisdom, or Chiara's, or yours. That's vital. Because we see ourselves in you a lot, we learn from you and I think that's crucial to sustain the whole enterprise. It's connected to motivation. I've heard many professors that say that they don't want to get involved in projects like these, they just want to teach. In general, I think many factors influence how motivated professors are to push for these things. I don't know. That's what I would say.

Interviewer: These are very important issues. Time and all kinds of resources. Can you think of some dreams for the future of this project? Where would you like this project to go?

Respondent: Wow. Great. I like that. Let's create fictions. Possible futures. I'm going to be specific. In the next few years we're going to have a specific program at Tadeo, a transdisciplinary project that unites all departments to think or create an educational program to deconstruct patriarchy. Mixing social sciences, humanities, creatives, artists and economists to deconstruct and educate. We're going to have this program, a double

major with Canada and graduate school with exchange programs for interns and students. Not only in Canada, students from Canada could come here, but also to Argentina, Africa, Asia and we're going to build a network, an alternative to patriarchal academia. We'll have that soon. We'll also have a research program. Not only a project but a program, with the same universities that will participate in our specific degree. We're going to have foreign students and indigenous women, Nasa, Aymara and Kogui; those women will learn to deconstruct patriarchy. That's my dream. And we'll have more male professors tackling these issues from their perspectives and recognizing the need to transform patriarchal logic from their place as professors, trying to form their own thoughts on femininity from their perspective and fostering critical thought in their students. We'll have a radio show, like a podcast, in which we'll share voices from the different countries involved in this program. This show will expand and have such visibility that it will attract more funding so we can get all the money we need. And we'll have a space for open knowledge, without noise and stress, not like Q1 or HJ magazine; we'll experiment with communication devices to create knowledge, share information, and introducing people to these perspectives. That would be fine.

Interviewer: Perfect.

Respondent: Do you like my dream?

Interviewer: [01:29:55] Yes, I love it. Well, those were the questions I had. Is there any topic we haven't talked about yet? We can talk about that now. Do you have any comments or something you would like to add?

Respondent: My bias has been very strong and I have learned a lot from this project because before I was trying to learn from an abstract point of view. The links, all the intersections between different subjects and ideologies, of course. But mostly the relationship between communications and design. Every time I listen to an historian I wonder why we divided the disciplines like that. Do communicators not make history? Are historians not communicators? I think it would be important if you historians recognized this. You have a PhD in history, right?

Interviewer: I have a master's in history.

Respondent: You have to recognize the historical perspective of communication and we have to recognize your perspective, we can't see our disciplines as completely separate. It has been very important to me to mix communication and design to deconstruct collective concepts. I think there's a huge opportunity to see these issues from the perspective of gender. This allows us to reflect. Design has been used very specifically, that's why when we read prototype we think "thing" or "artifact". It's like he said.

Interviewer: Bjarki?

Respondent: Bjarki. What a nice name, it's sonorous. Bjorke. We couldn't have identified these things before. We're focused on discourse and imagination, very abstract things. I saw this topic from the point of view of gender and I think we could analyze these connections, seeing design as a border. Not even design, the whole creative process. A

place that allows us to discuss. That's all I have to say. I would like to thank you. To us, this project has been oxygen, life, drive, interest, finding new horizons, seeing what's possible. It has helped us find meaning in our teaching. The people who planned this have my gratitude; it's such an ambitious project on a global scale. And I'm grateful for everyone that helped with this program. Thank you so much. Thank you for being open to learning from us instead of telling us what to do. We're very grateful for that.

Interviewer: We have loved learning from all of you. Thank you very much. I'm going to stop the recording now.

Respondent: Right.



GENDERED
DESIGN IN
STEAM

ID61 - Developing innovative urban design strategies to combat gender violence in Mexico

Interview transcript

Interviewee:

Erika Rogel Villalba | Principal Investigator
Universidad Autónoma de Ciudad Juárez (UACJ)

Interviewer:

Ona Bantjes-Rafols | GDS Research Assistant Coordinator
Carleton University

Date of interview:

18 October 2021

Transcribed by:

Vanan Online Services, Inc.

ID61 - Developing innovative urban design strategies to combat gender violence in Mexico

M (interviewer): Ona Bantjes-Rafols

R (interviewee): Erika Villalba

M: Perfect, then I want to start with a fairly broad question. I wonder if you could explain the history of your project and you can spend as much time as you want in this question.

[00:00:00] R: Well, yes, the project was initiated with a proposal from the group of the Academic Research Body, which is made up of three university professors working in similar areas. We have been working for a long time on issues of social responsibility, in design, which is basically my area of study. My co-worker is focused on transdisciplinary, interdisciplinary and multidisciplinary issues. The academic body to which we belong or in which we are registered at the university is called "Design, User and Environment" and it was created in 2014 when we got together to do this work. I have been a professor at the university since 1996. I became a design major because I was a coach for the basketball team. I was also a player. So, in order to participate I needed to study another career and design seemed to me a very interesting area and with a wide landscape where I could dabble and work. Later, when I had the opportunity to get a scholarship to go to England to study for a master's degree and a doctorate, I saw that it was another way of working and viewing design, unlike what was done here on the border. We are very close to the United States, so the way in which design works here in this neighbouring country is a little more directed towards marketing, towards advertising. So, the vision that we had of design here was just that, to work to dress up products, to sell needs pretty much. So, when I arrived here in Europe and they taught me this way of working design in a more responsible way, it was necessary to do research to be able to approach it and really guarantee a result. So, part of my thesis is focused on doing research about design in greater depth to understand the user's needs. Then, when I returned to my institution, my view changed, the view that the university had was to satisfy the needs of a client. Then, when I came and told them, "No, the need serves the person who is going to use the product, not who is going to pay for it." Then, it started to be this change of ideas and my thesis focused precisely on introducing in-depth research in the area of design. Thankfully, I was lucky that the directors believed in this project and gave me the opportunity to start working with the students, especially at the advanced level, with a vision of social responsibility. That is to say, instead of creating projects of brand design, branding, for example, they allowed me to look for NGO associations that needed help. One of them was Casa Amiga. Casa Amiga is an institution that has been working for many years here in Ciudad Juarez against gender violence. So, all the visual material they used was of very poor quality. It was done by whomever women worked there or if there was a good-hearted designer, he would make these posters. So, we dedicated ourselves to study this material and we saw that it did not work, that it still had a very classic look, very cliché, very typical. And then we began to take on these projects with the students. The students looked at me very strangely. They said, "I am going to be a designer, I am not going to be a researcher." So, it took me many years to change

this perception of why design needs to work together with more in-depth research. Now we have managed to create a research academy in the whole faculty. All the professors are now very aware of this because we also started to give courses. We began to visualize the importance of taking on projects with social responsibility. Then, at the same time, we began to generate interest at the national level, for example with CONACYT, which is one of the institutions that supports or has many projects that support [00:06:38] our needs. They began to request that the programs, the theses created by the students, should have an impact on society. I remember, and this is still recent, that students complained because society did not recognize our work, because they are poorly paid and when I turned to them and said, "Well, what have we done for society?" Society is very sure what the role of a doctor is, it is very sure what the role of a lawyer is, what the role of an architect is, but it is not sure what the role of a designer is. And since there are so many definitions of design, so many concepts, it is sometimes difficult to make them understand the word, whether it is a verb, an action, a degree, or a discipline. Even moving from being a technique to a profession, to a discipline and thinking that it can become a science is difficult to understand for our society. So, if we do not give guarantees that the work we are doing is really going to work out, that it can really help to solve a problem, then no one will recognize our work. And that's when the students start to say, "Well, okay, we have the opportunity to work." So this project came along very well. We are very desperate because it took a long time to produce results. We were looking for other proposals because we understood that money is not completely the solution to a project, because even sometimes it is also very difficult to spend the money. As I said with many restrictions or labels, sometimes it doesn't end up being easy to use. So we began to enter into other projects, to participate with some writings, some published articles, some book chapters and we had to cover a little bit the scope, but not only of gender. When we began to study the problems around gender we saw that there were other elements that also were problematic. In other words, since it was a complex problem, there were other problems that stemmed from it. So, since we did not have enough time to develop projects in depth and the students did not have such a high level of knowledge of research to be able to delve into such complex issues, we decided to take part in the program. So we decided to just tackle part of the problem, try to look for support, an opportunity to improve, and come back. We managed to consolidate the master's degrees; one of them is called "studies and creative processes in art and design." So today we also have the opportunity to influence and try to encourage the students' interest in these topics. A short time ago we also managed to obtain a doctorate in the institution. So we already have a bachelor's degree, a master's degree and a doctorate, and I even have three students that I have brought with me from the bachelor's degree. So, they have been able to move forward with me. The poor things see me even in their dreams. But I think that at the same time many of the teachers were my students. So it's like the knowledge and... I mean, we have more crazy people with this crazy idea of trying to have a greater impact on the social issue. So, nowadays it is not strange to think that in their degree projects or thesis projects they can use these topics for research. And we have topics from support of didactic material for Down syndrome, for dyslexia, for breastfeeding, for whatever you can imagine. Migrants are also a complicated problem here which the pandemic has made worst. So, when we sat down to look at this problem, we saw how complex life in our city is. In other words, our urban environment. There is no lighting in the streets. The road is seldom paved. Since the distances are very long, we

almost always drive a car, and since it is easy to acquire it... or rather, it is not so complicated to acquire one from the border, the city is not designed for walking, for moving from one place to another, even by bicycle, right? The public transportation system is very bad, so that generates greater lack of safety. These things are created... They are called "fractionations", closed housing spaces. With the lack of security, more are being closed. In [00:12:39] other words, neighbourhoods began to close their... to protect each other, but at the end of the day this generated more violence because it was impossible. You have to go from here to that corner and it's all dark and so scary. And you learn not to walk alone in the street, not to go out at night. And when you have to do it, well, you have a lot of difficulties to move around. The same thing happens with university students. I mean, no one is exempt, even when you have financial stability. So when we got together, we had the theme of design in mind which was more about social responsibility, but when the project opened up and discussed gender, we saw a great opportunity to participate. At the beginning we were only going to be two collaborators and an architect who was going to provide his urban perspective, but we began to have many problems because he was from Spain, the architect I mean, and he has a very imposing personality, right? So, he did not even address me, he only addressed my partner. So, out of respect and because he is older, I accepted. Until a day came when I said, "No, I am the leader of the project, it is my research, it is my project and this is how it is going to be." And he said, "No, we are going to do it like this and like that." So there were times when it seemed like I was talking to myself, because he wasn't listening. So I talked to my partner and I told him, "This is about gender issues and here we have him doing things that show me no respect, in which I am not allowed to..." What I was saying had no value and my colleague could say exactly the same thing and he would say, "Yes, fine," and then it became just a conversation between them. He was a very valuable person, with a very important part on this work, but we were a week before delivering the project and my partner Leonardo and I decided he was not going to participate and we told him thank you very much. So, in one week he and I finished the whole project. We invited a teacher who had already obtained her PhD in Urban Studies. She is an economist. So it was very good for us because she also had a different profile and she works a lot on these human relations issues because she also has a master's degree in Peace Law... Something like that. Something which has even kept the group well balanced with respect, without hierarchical problems, and allowing everyone to participate, to explain. So we initiated the project with my colleague Leonardo and the doctor who joined us, who has a wide experience in gender. And well, then it took shape. The idea of working with students came precisely because the three of us are teachers and our area is carried out precisely within the institution. We always have projects with students. On this occasion, since the doctorate had been opened, we were able to add doctorate students, master's students and bachelor's students. We had always worked only in a multidisciplinary way, meaning with several disciplines giving their opinion and working. Then we made the leap to transdisciplinary. Well, we are already talking about things that have different dynamics, so we added several people. There were people who did not agree and said, "I don't know what I am doing here with a psychologist and I don't know... She is an economist and the project is about design, why are we talking about this?" And even another student complained because he said... a teacher was explaining gender issues and precisely how difficult it was for women to be in economies, to be on an equal level. And he said, "But also the men..." "Yes, also men, but women need to make these

problems visible." "No, they are complaining all the time." And then he would start a discussion and ended up not staying in the group. He even left the master's program because I was **her** director and he did not accept the fact that a woman was telling him what he had to do, how he had to do it. So it has been very interesting the first steps to form the work team. The issues we deal with are very [00:18:55] general here in the city. It is a potential problem that we have about the behaviour and dynamics that occur in the city and that are replicated at all levels, they are replicated at school, at home, and in places of entertainment and recreation. So it is not complicated to look around and say, "Well, the same thing happens here, here too." And I think the most surprising thing for my female students on many occasions has been to realize that we women play a big part of how we educate, what we allow and what we don't allow. When we work on projects for campaigns, we usually fall into the same clichés. That is, victimizing women, telling them how to take care of themselves, how to behave, how to dress, how to act, what to do or what not to do. And we hardly address the other group, which is to tell the man what he should do, how he should do it, why he should not do it, what is right, what is wrong, what is right, what is wrong. So, that is when we apply part of the research so that they can make these approaches to their environment. And well, that's how we decided to shape the idea of this project. To bring students together with the same topic and that several students from different areas of study participate so that the rest could see beyond their area of study, beyond their discipline, to understand how it works from the psychology point of view. The psychologist said, "What do I have to do here? I am not a designer." And I told her, "You are not going to design, you are going to tell us what you think, what you think is good and what is not good." And the same happened with economist. So each one... And a very interesting group has been formed. We also thought when we were designing it that it would be a permanent seminar in which we invited people with experience in different topics to see how each one of the topics could feed and nurture us, no matter how strange these topics might seem. And I think that the growth of the group, which is now in its second stage, has been interesting. I hope I didn't speak too long.

M: No, no, no. That's the idea, you can just explain as much as you really want to.

R: I explained how the idea came out, how we got it all together.

M: It's fascinating, especially this whole thing you're studying: gender and sexism. And it's replicated within the team and the research itself. So I think you've already talked a little bit about your experiences, how they've influenced this project, but maybe you can explain to me a little bit more about the methodology of the project, how your experiences have influenced the approach and methodology of the project.

R: Yes, well, we had to start from a more qualitative than quantitative approach, precisely because we were going to analyze the behaviour of the group that was participating and how they were reacting to certain stimuli, such as when we invited a teacher or brought up a topic. We also put on the table, for example, a starting point, right? What gender is, how it is understood, the definitions that exist trying to put everyone on a level playing field. To start at least from a base or from the construction of a base that could allow them to understand what is... Because everyone can have a definition and agree or disagree with it. So this took us a little

bit of time and to do that we did several exercises in which we... At the end of the day, what we were looking for was for everyone to be able to express an opinion, but with a solid foundation. So in order for that to happen, we said, "Well, first you have to read. First you have to review the bibliography." And the strategy that we are thinking of putting [00:24:43] together is... Since there were 16 of us, we were too many people for this system, which was another of the limitations. When we started the project we were in pandemic and when we began to develop the project we were already in pandemic. So, it was not easy to know how to interact, how to hit the right timing, who speaks first, who replies, who... It took us a long time to learn because the sessions were very long and everyone had work to do, everyone had classes, everyone had homework, and everyone had to do things, right? So we had to be very careful to be able to start working with the group. So what we started to do were like outlines, a bit like templates, a sort of structured observation in which we anticipated the dynamic, what was going to be done, the participation timing, with the intention that everyone could have their time to give their opinion, right? And then the next round to see what they think about what was discussed. The first sessions were complicated because you had you turn on the microphone, the camera, test the sound.... So there was a lot of time wasted and then this situation also happen a lot about if you must always be nice, always be condescending, always agree, especially with a superior, right? Especially if he is your teacher, if he is a teacher or if he is older than you. So we had to put everyone back on the same level to empower them and make them believe that what had to be important was what was said and above all to teach them to listen. I think that was what took us a little longer, but it worked. The teacher, Dr. Lourdes, who is the other leader of the project, also implemented dynamics like "let's forget all about academics" and "how do you feel? How are you?" This ice-breaker, as we sometimes called it, was a way of gaining confidence. So that there wouldn't be this stiffness, this seriousness that a seminar implies with the people who were in charge are the teachers and that they would see them at school or they are teaching you in some subject. So that was the first task. The second task was how we were going to locate some important researchers. Because it is true that Ciudad Juarez is one of the most dissected and analysed cities in the world... So we said, "Well, we don't have to go too deeply into what has already been done. We are going to review what has already been done from the perspective of the same researchers who have worked on these problems and we are going to begin not to start by scratch, from what is already there, but from the point of view of design. How is the design going to be understood? How is it going to be structured? So that was another task, to start looking for all this bibliography, all this information, to bring in these experts in research to the areas that they are familiar with. And then we divided the group into two other groups, one to work on social issues and the other to work on urban space issues. So, after doing this division, what we wanted was for the group to have the opportunity to delve a little deeper into the various documents that were available and then present, each of the groups, the ideas that they had found, what they thought were the most important or most relevant points. And in this exchange of information there was a... That was also very interesting for me because first it was exposed as a presentation and there was a voice that was the one that participated or generated this information. But then we decided to bring together one from each group, make pairs and they began to structure a problem about urban spaces. So one whole group had information about urban space and the other had all the information on the social problems that had been reviewed.

Then, by putting them in different pairs... It didn't matter if they knew each other, if they were men or women, but they had to be different. They had to present an exercise. This exercise involved these two points of view. And try to come up with a potential project. So, some very interesting things came [00:30:54] out, some of them even said, "Oh, I would never have thought that. This could be an interesting topic." Because usually one of the problems we have is that you see the problem from outside, you see it as distant. And when we talk about such complex issues, you start to break it down until you can reach a specific part so you can focus in able to attack the problem with more energy or to understand it from another point of view, I think that is also a contribution of innovation in how design can work. So once we got to this point we went back to saying, "Well, how do you solve it? What type of group would you be working with? What proposal would you be using? What method would you be proposing?" And then we also came up with a series of methods, which is one of the areas that I work on the most. What kinds of processes or methods or methodological designs could we be implementing and how to change...? You can select any method, but when you use a different one, how does it alter the outcome? How feasible is to alter the outcome? So not everybody had this information so we also had to establish again a baseline, where to start from, and a minimum of knowledge that everybody had to have. And well, we were still in a pandemic, so, when talking about social problems, we always thought about an approach, about personal work, field observations, interviews, and well, how we were going to do it. We have participants, for example, a girl who is now in Colombia, another who is in Sonora, which is another very large state, meaning that they were not here. And how could they start to work? How could we make these approaches? And well, then we had to start making use of other technological resources that have also been helping us, such as the platforms, the surveys through the platforms, the interviews through the platforms... And well, in some cases it has not been possible at all, and well, it has been necessary to go and do it face to face. For the tours, we divided ourselves into groups, we split up and each person filmed part of the tour where their area was, where they lived or where they had to go, and maybe it wasn't the project I was going to work on, but if that was useful for my colleague, well, there is the information for whoever wants it, right? So part of the method or process was precisely that. First we look to bring together the group, the knowledge, first the staff and then the knowledge. And then we decided that the projects would be like... I'm losing my voice. As we were going to work in a transdisciplinary way... In transdisciplinary there is no specific method that tells you "first you do this, then you do this, then you do this and then you do this." It is precisely part of working in innovation, which it can change because the user or the group you are addressing has a different dynamic or does not give you permission to do so. So at first we thought it would be a phenomenological type of research, but then we said no, because we need to have several variables controlled with precision. So, in order to have these variables controlled, well, then the participation of each project... I mean, each of the members is going to develop a project. We also thought that maybe this would not have as strong an impact as if we all took one project. But that's the interesting part of transdisciplinary, that the sum of these different points of view... You might be thinking, "But how is that going to help or how is that going to solve it? And often it is these small details that can be the key or the issue that is not being considered. So, there are many campaigns carried out by the government, by the Secretariat, by other large institutions with many resources, but it does not innovate, it does not come out of this same

formula, the same package, so to speak. We have detected that there is an incentive for innovation when you get out of this very classic point of view, so characteristic of this formula that you know you it doesn't get lost, especially on television, [00:36:51] which is when you reach the masses. And the positive outcome is that there are no outcomes. The big mass advertising campaigns that are produced don't have a follow-up to know who they reached. How many people it reached, in what way it reached them and what exactly impacted them? So we return to the same argument, you invest a lot of money and you don't know what the result of that was. As opposed to when we do a research project on the academic side, in which it is possible that we don't reach such a massive number of people, it is possible that we only stay in the prototype phase. But what is the difference? From the moment the project is designed, you are already thinking about how you are going to assess it and how you are going to evaluate its impact. Then, each of these projects may have a different method for its construction. Transdisciplinary, what we are looking for or what we would be looking for - we still don't know if we are going to reach transdisciplinary or if we are going to stay in interdisciplinarity - is that each result of these projects that are achieved can be measurable. At the end of the day, what interests us most... I don't know if you want to record or publish this. What interests us most is not so much the result of the impact of the product. What interests us most is the result of the group. In other words, how the group changes its way of thinking, its way of doing design, and I think that would be where we could find transdisciplinary. Meaning, how this group of people with different profiles, different ages, different levels of knowledge, can interact, can work in the same way, but not just to do a project because it has to be delivered by a certain date, but to really change their way of seeing and doing design, because tomorrow they are going to... I think... They are going to be teachers. Some of them already are. And we're going to be able to replicate what we're learning in a better way. If I had had this project 20 years ago, my life with my students would have been easier. So that's part of how it was thought out and structured. I am much attached to Participatory Action Research because I worked in stages. So, it is very easy to evaluate each of the stages. So, that's why we decided to establish it at different stages, at different moments of the project, and well, I think it's working. We've been working slowly in this last period, but we're still human, and suddenly we had some personal problems. And well, even I was forced to be absent, but well, the important thing is that the group has taken responsibility and it doesn't matter if... The three leaders had been absent and the team continued working as if we were there. And I think that's amazing. Usually education in schools means to arrive and sit and wait for the teacher... At least here in Mexico is like that. The teacher gives you the information and you do what the teacher tells you to do. If the teacher is sick and he/she doesn't come, we all leave. So, you change people's perception about the idea that they don't need someone in front of them in order to be able to continue doing their work, they don't need someone else. I think it's a very important for your development, right? Well, I don't know if I answered your question.

M: Yes, yes, totally. These thoughts are very interesting, but not only the result, but also the whole process of changing the research groups themselves. I have a question and I might have part of the answer already, because my question is: who is this project aimed at? What community are you helping with this project?

R: Well, first of all, I think it is the same groups in which we are participating, because in the future, as I was telling you earlier, I think they will be in charge of many students, many [00:42:24] ways of thinking, and many ways of working. So seeing how we are working right now in this way in which respect, integration, timing, moments and things that sometimes seem as simple as a joke, like a prank, can be something sexist, misogynist. So, knowing how to control a group I think is important. To understand that design can do more than just cover products or create purchasing needs. If it can do that, then it also has the power to change mindsets, ways of working, ways of doing. I've been very happy to see that designers and non-designers are surprised, "Hey, can we do all that?" And have such a wide landscape opening up. I think this group basically stays within the academic area. So, we are able to change the students' way of thinking, to change the curricula and so in the future it can be implemented in the environment and in the workplace, I think it can be very important. In addition, in the projects that they do now, they are going to have an impact on the community. Everyone is very concerned, for example, about the students. Some are focusing on women who work. There is another project that is more directed at a community of women in a very poor area. Another one is addressed to the ones working in the maquila. So there are various projects that have their specific area or their specific group that they want to influence, but I think the most important or the most relevant thing is what we are creating with the group itself. As I said, it's very possible that in the future they will become professors of some institution in the areas of design and they will already have this other way of seeing and doing design. I was very pleased, just last Friday, that the director of the faculty where I work congratulated me because the head of research for the whole university mentioned that the project we were carrying out was one of the most fascinating, not only because it had international resources, but also because of the subject matter. She also was very happy that there was a project of this level and quality at the university. This was very significant, very important, because one of the goals we have set is to work on the public policies managed by the university itself. So when she said that, I said, "We already have an opportunity because it opens the door for the institution to also consider this project as a milestone." That's what we are... I think we hadn't... When we did the project, we hadn't visualised it so broadly because we were afraid of not fulfilling what we were promising, but now, as we have progressed, there are two very important sectors that we are interested in reaching. For example, the results of each of the projects are still important, but the fact that this door has been opened both for the institution and for one of the important sectors we have here, IMIT, which is the institute that collects all the information from all over the municipality, I think it is also very important, because it becomes not only important for us, but also highlights our struggle to be notice. Usually the government has its working group, implements its actions, its methods and leave aside all these investigations, all this work. So I think that now we also have an advantage, a very important factor, which is to open this door and let them know, let them find out what we are doing. One of the first products that we finished in the first stage was the production of a book, which is still in draft form because we have only just submitted it to the school for the... What is it called, blind peer review? The evaluation period so that it can be published. We are in that process, but the compilation of all the information was very interesting as an initial result. We plan to distribute this to the universities, at least in the northern part of Mexico, which is the southern border of the United States. We have already contacted the other universities to tell them what we have been doing

and to see if we can form a network. The second product, which is the one we want to get ready for March, is the [00:49:15] one that refers to the second stage of the project, which is precisely to show what the process of each one of the developments is. The first was the analysis and diagnosis. In other words, understanding the problem, and the second, the second part, which becomes much more graphic and much more visual, includes the method with which you are going to work, the development of the proposal, the result of the proposal, obviously, and the conclusions. And I don't know if we can finish this work by March, but we plan to do it in Spanish and English in order to have a little more impact, because since the method and process of each of the projects is already included here, it can also be very illustrative for the students when they want to develop a social project of this type so they know which method should they use depending on the study group they are working with. So we are thinking that it should be something a little bit vast, broad in terms of the pictures it is going to contain. Right now what we are doing is making a template, I don't know how to say it, a layout, so that we have a bit of order in the size of the images. How to put the information so that most of the work have almost the same amount of pages of information on how to develop your project. Already, each of them is working on developing this. The financial part has been very complicated, working in the middle of this, but we are hoping that by December we will have the first steps with the groups and the first results of what would be the layout or the object with which we would be working, as they can be different things: from an animated infographic, a comic, a short film, a video... There can be many types of things. What is important is what the user requires so that we can really support them. Here I have two of the examples, which are the most advanced ones. I don't know if I can show them to you or share them. We also have a... We have been working on this one. We have a page, I'll share the link with you right now, which is still under construction. That's where we're going to start uploading each of the materials. We are doing it in English so that they can have access, they can enter, and they can see and have this communication a little faster. And we are also going to attach the projects to this page so that you can also see the progress. I think this second part is going to be more visual than the first. The first one, well, it's already compiled. I can also send you the draft of that right now. What I sent as part of the last report were only the summaries that we were going to include. Here is the complete content. I'm telling you, we've already submitted it for review at the university, so that I can publish it. That's why I was asking Kerry if we could use his logo to include it in this work. For the second part, which is the methodology, the development and the evaluation, and is going to be in English... Maybe then... If you want to review it, if you want to see it, I don't know. Maybe we can try to publish it together, taking advantage of the fact that it's in English, right? I don't know, obviously it depend on you guys... Or you could give us your opinion and that can also be very important for us. So... Oh, I'm talking about so much...

M: No, it's perfect, it's what we want. If you want you can also pause for anything at any time. Just say so and we stop. But well, super, super cool this book thing and I'm sure we can see some connections and have people who want to help. I think Jill would be delighted... Well, I don't speak for her, but I think she would be super interested in reading this second phase about methodology and we have now also an expert on libraries and things like that. So maybe she would also have some... she could give some advice.

[00:55:18] R: Yes, of course.

M: We can talk about it. Sorry, sorry. So... You've already talked a lot about disciplines and how necessary it is not to stay in just a discipline and to look beyond, but I wanted to know if it has changed with this project... I know you already had a broader vision of the importance of interdisciplinarity, but if it has changed with this project, do you have a different perspective than before the project?

R: Yes, the truth is that it has changed. I don't know if it's the project, or the time, or the pandemic, or all of that together. I think what I've learned now is to be a bit more patient. To be able to understand that we can't get results overnight. That we can't change people's perception. Just because I am very enthusiastic and I want to spread it to my students, doesn't mean that they are going to change their way of thinking. Because they live in the today. They live in an environment. They have their own problems. So, I think that this impetus that I had when I was young, this project has taught me to be able to observe how people think from other points of view. And above all, that I am not always right. I used to think that I was always right. And what I have learned in this project is to listen. It is so valuable that a 20-year-old undergraduate student, who could be my daughter, can talk to me and teach me. I think that's the most valuable thing we've taken from this group, from this work, and we wouldn't have been able to do it because we're always running around. So, this limitation of remote working, this lack of contact, especially for us Mexicans who are so much like, "I'll invite you to lunch, let's go..." In other words, we solve everything with food, meetings and parties. So we needed a reframing. Everyone in the group, or almost everyone, has had problems with family members, with deaths, with sick people, and this has had a deep impact on how sensitive you become to such serious problems in the world. And you start to think about whether what we are doing in our work, in our lives, how we are living it, is really worth it. So all these reflections that have taken place in the group have not been easy. People cried a lot. And trying to generate that empathy has also been very valuable, very important, because at the end of the day we realise that we can rush through projects, we can rush through calls and at school they put pressure on us to publish and the class and we are doing everything, everything, and everything. And all of a sudden we even forget ourselves. I have to go to the doctor, I have to take care of myself, I have to do this, I have to take care of my parents, which did happen to me and it wasn't easy. And we all, we all had situations... that the pandemic has come to take us out of a comfort zone. And we worked with this group on this occasion, with such difficult and complicated issues, or to sit down and think about how we can contribute to improving them, even if it's just a little bit. Above all we need to put it in writing and to leave this explanation of why it is important to pay attention to even the smallest part, because it can be make a difference on these massive campaigns and a difference when it comes to paying attention to a small group of women who nobody listens to, who nobody has taken them in or who have no information on how to improve their situation. So I think that in this sense, the project, at least for this group, has been very important. And well, not just this group, because the fact is that the university council that has more than 35,000 students is already talking about it, that they are talking about us and [01:01:06] how it is a good project and that they consider us... So I think we are making progress. That's why it's also going to be very important that we finish

these products so that we can distribute them to other universities and we can create these networks so we can continue with these seminars, inviting people. And well, children grow up, students grow up, they finish, they leave, but we hope that when they leave, they already have this seed, they already have this different way of working and seeing design itself and its environment. Oh, I'm going to cry. I think that is the most important part that this project has left me.

M: Yes, I think in many parts. Time and empathy with people during COVID have been important. The other question I have is how you have maintained the gender approach throughout the project process.

R: I think that the colleagues we work with and ourselves... This issue of being able to define for everyone what it is and how it influences or how these little chats or these little jokes that even we women make, or we allow or we laugh at affects us. I think that it has been part of the day to day work in the group, to realise that someone says "oh, careful, what we are saying here can be misinterpreted, right?" And then we reconsider in the moment and we can say, "Yes, you are right" and if one doesn't say it, another says it, or brings the example. "Oh, remember that time when it was mentioned..." To not make it so direct, to not make it so obvious, because we also have to be careful not to be too direct or too aggressive. So I think it has worked well. Dr. Lourdes has been working on gender issues for a long time, longer than me. She even developed a project within the university where she instituted this idea of the "violence meter", which is a sign that tells you the level of violence implied by the words or some of the actions... Let me get it and I'll share it with you. And we published it all over the university. And then, the students... At first people laughed, they didn't pay attention to it. "Oh, yes, yes, yes. So I can't make... they made jokes about it." And then they called us radicals. But it was also a very interesting project. I was involved in the design of some things, some information, but she was involved in training at all levels and when you ask her which was the most difficult level to train, she said that it was the managers. It is one of the most complicated levels to train, those who are at the peak of management. It is more difficult to train them than those who are, for example, at the bottom of management, those who clean, mow, mend the garden and things like that. They are more empathetic, they tend to be more empathetic than those at higher levels. So, yes, it's been very interesting work with a lot of self-reflection. And I think it has worked well for those of us who are working there. So, we are working on some new subject all the time, with new readings and we have the opportunity to... For example, at the beginning it seemed strange. One of my students wanted to work on a project about breastfeeding in school, and she asked me if that could be considered gender-based violence, and I told her, "Of course it is." Because it doesn't come just from men, it comes from women too. When they turn around and they look down at you, or tell you to cover up or go over there or hide, or don't go to school because you have to feed the baby. So I thought it was very interesting and I decided to continue developing it and in fact she already did her info graphic because she was very excited. So now we also have the material. Micromachismos are another of the topics that we have almost ready. And these are the micro issues that I was telling you about. And we have been applying this a lot, just like [01:07:10] the "violence meter", we have been applying it a lot. So, it is like a daily reflection at work realising that we can make changes,

especially to the extent that we are aware of what is and what is not right. That is the part that we have been promoting all along.

M: And earlier you were also talking about how complex this gender issue is and all that, so I was curious to know if other aspects of oppression, issues of class or generational differences (that kind of thing) were also discussed. Did they?

R: Yes, well, for example, the gender violence we were talking about is a very complex issue. It also encompasses economic issues, development issues, urban issues, socio-cultural issues here at the border, infrastructure issues, the laws themselves, the same drug trafficking that is generated here in the city, lack of job offers, this American dream of wanting to leave and all the people who come, migrants who cannot cross, that have to stay here. So there is a lot of cultural diversity and that is very important. So I think there will always be obviously... They are involved in each of the aspects, in each of the themes that you select or that you take and the gender issue is always present. Why? Well, because I can tell you that even in drug trafficking there are gender issues. In other words, there are no female leaders in drug trafficking, it is a field specifically directed to a... In short, these are things... Here what we had to be very careful about was where the boys and girls, the students, were going to work. We had to ensure that they were not going to put themselves at risk. When the time came to do an interview or to go and ask questions or request any kind of information, there are very dangerous areas here, neighbourhoods where if you don't live there, it is better not to go in because you don't know them well, right? So we had to be very careful in this aspect. The same with the topics that we were selecting or in quotation marks "authorizing", we had to visualize that they were not going to put themselves at risk. The subject could be very interesting, but if we saw that they were in danger or they could put themselves in danger, we had to ensure that they were not going to risk it. In this situation, if she or he could be in a vulnerable position, it was better to change the topic because it is so broad, so complex, that wherever you choose, there is something to work on, right? So it is so broad that the important thing here was how you were going to have a point of view out of the ordinary, that was not the usual, that was not the one that everyone has already seen. Everyone has already studied that and there is a lot of that already, why do you want to do more of the same? So, they had to change their narrow point of view to tackle the issue from another perspective. And the other disciplines were what strengthened the support. They also gave ideas on how to do this. So I think that this is not the end of it. That is why we saw the opportunity to make this a snowball, a domino effect. It is a long term effect that would pay off in the future. Because what we are working on is precisely on people, on changing people. When they manage to see that their work has a relevant effect and they will be convinced of what we are convinced now, because we witnessed it. But it has to happen to you so that you can really see and really believe that through research, the design can have a very wide contribution in these issues. Well, you also have to respect the spaces and if there are already experts who are dedicated to making diagnoses, then you have to take those diagnoses and from there create proposals. You don't have to go into the lion's den either. So you approach it from another perspective. So design does not always involves the creation of a product, it can also [01:13:25] be a service, it can also be a management decision that is done to move a group that has economic or political power meaning that group has an impact on a

user. So, it is important to see or understand these parameters of design in complex problems. I think it is also important for them, isn't it?

M: You've also talked about the pandemic and how hard it's been for the whole team and I'm very sorry for all that. Can you talk a little bit more about how you've overcome these obstacles, maybe talk about some of the strategies maybe that you've used to overcome these obstacles of the pandemic?

R: Well, I believe that in the face of loss there will never really be words or anything to comfort you. Each person has his time and his moment, right? So, we have tried to be respectful by meeting at least once or twice a week and asking for progress, work, presentations... a series of activities. Then, suddenly, "No, well, I am not going to be able to be there because this happened..." Or the person just disappears. Then you just leave it be. "Does anyone know what happened? How are they? No? Well, then they tell us, "No, this happened to them, their relative passed away, or something like this or that." So we give them time. We give the necessary time, we give the space. Just to let them know that we are here to help them. And some get back to work faster than others. Others prefer "I'd rather work to distract me", for others it is really a question of time. So the good thing about the group is that... It's not that I have to be... I've been there 95% of the time, but the times I haven't been there nothing has happened. And that's also interesting to see, isn't it? Suddenly you think that if you are not there, things will not be done, but no, they are done, they will go ahead. It is also interesting how the work is divided. I mean, we all collaborate to advance within a project, but also each one of us has our own project in which we are responsible, but that does not limit the ability of others to come, give their opinion, say, propose and vice versa. So, I believe that this part allows us to move forward and that each one of us can take our own time. If someone is stuck in some section we are always asking "how are you doing? Can I help you with something? And "good, good, I just haven't had time or I am very busy with this or this situation happened to me." For example, I also missed work once. My dog that we had for 15 years died. She was my daughter's companion since we returned from England and it was very hard for her and for me, but with so much work suddenly you find yourself saying, "I can't even stop," but these are moments that it doesn't matter if... It is how much value you put in certain things, in people, in small animals. You have to understand that everyone gives value to what is important to that person. We have also learned to respect that a lot in this project. And there is a very special, very special awareness on everyone's part. You feel welcomed by the group. You feel supported and sometimes you are very late in your deliveries and everyone joins in to tell you "How can we support you? How are you doing? What are you missing?" And I think that is the part where you recuperate from what is affecting you, because you feel like you are part of a family, in confidence. So I think that is one of the good things that the group has generated. The teacher, Dr. Lourdes, has also given us moments in which... Because suddenly one of us starts to talk and gets sad and then another one comes in and says "no, I'm also I'm sad." And then there are about 4 or 5 of us like this... And she gives us a therapy... I don't remember what it is called.... She supports [01:19:03] us with breathing exercises, mental work, learning how to be strong, that we can control everything and instead of working... It doesn't matter if we have many pending tasks, the session is focused on strengthening us, strengthening us mentally, spiritually, so that everything

is a little bit calmer. If we had back pain from working all day, if we had a headache, if we feel something in the chest, she starts talking about how we can balance ourselves, that we can and she already has a way.... It takes her 20 minutes to try to get us all to concentrate, to close our eyes, to breathe, to reflect, to repeat... And it has nothing to do with religion or anything to do with... No, it is simply a way to calm down and to know that we will be able to move forward and that we will be able to cope with it and that is exactly what the whole group is there for, to support us. And that has also helped us a lot. I told you that I am always rushing, rushing, rushing and I have to finish, because I have this task, I have this other task. Those moments when I have a pause they are necessary. So, that's the way we support as a group.

M: That's good, clearly. In the Academy, we don't always think so much about mental health. I wish other professors thought about that. Well, I want to, if it's okay, also talk a little bit about your participation in the Gender Design in STEAM project, let's say, the program... Tell me a bit about how the GDS program has helped, or not helped, your project.

R: It was very interesting to listen to the other projects. At the beginning, you really don't know if you are doing things right, if others are proposing better things, or how it is going really. So the hardest part for me was when we had to work on the Miro board, because I didn't understand how it was supposed to be used and I don't know if in that case I was too late or if I didn't do what was expected, I don't know. And those are the issues, you get into a lot of conflict, because there really has been a lot of work, there really is a lot of material. And suddenly, for example, you turned around and saw one of the projects working with a mechanical hand... Well, it is basically industrial design, isn't it? And then you say, "Oh, I am in academia and I am in research. Is that what they are expecting from us? I don't know if this is going to be useful." I don't know, it's this whole thing about whether you're going to disappoint the expectations of whoever is supporting you... Well, I think they are very important. So this... What is it called? Courses? No, they are not courses. Well, these meetings that they have done, workshops.

M: Lab 1 and Lab 2.

A: Aha, yes, they have been very interesting and very important. First, because we have a little more time to explain. Suddenly, "three minutes," and you... And then it was in another language. You don't know if you are doing well or not. I think it helps a lot to see other projects. It has been very useful for me to see other projects and they even mentioned a course they had had on digital ethnography. And we started to look for that information to see how we could begin to review this type of methodology. We saw how the team in Colombia was working with women. So suddenly, when you see these projects you say... Especially the one about making visible women's work, you say, "Yes, yes, it is important." Because sometimes you have doubts, "Are you going to take me seriously?" And yes, really, you see [01:24:37] other projects that have been going on for a little longer and have a little more experience. Argentina and Colombia have much more experience than us in Mexico and more than us here on the border. So, that's when you get encouraged and say "yes, I'm doing well. I still have a long way to go, but it's going well. These efforts are not in vain." So being able to watch and talk in these spaces for a bit longer has been very interesting. There is a project in Brazil on mastography or breast

cancer, which consist in presenting the images as they are, so women do not have to change or hide their physical shape which empower them to feel good. I was shocked because a while ago we also worked on a project about breast cancer and it is very, very important. Many women in all economic levels and from all social classes... And then you say yes, it makes sense. It does make sense what you are doing, the involvement on what you are doing. So I think it has also allowed us to comply... to keep an order in terms of dates, in terms of commitments, because it is also true. In other words, you get into the topics and they can seem endless. I mean, they don't end. And you have to stop, you have to say "well, yes, it would be great, but it's going to take you many years. You need a cut-off point. And considering that cut-off point, what have you found? What have you analyzed? What has changed and how would you proceed from this point? Because it's a starting point. So yeah, they've been really good. Obviously, we all work on different platforms, with different software, in different ways. It was much easier for me to take a power point and put there my progress, my images and present it to see if that way I could explain what I wanted to say because I forgot my English and I don't remember Spanish, I didn't know what I can speak well and what I can speak badly. So yes, it's a little complicated right now. In fact, I didn't know if this interview was going to be in Spanish or if it was going to be in English. And when I saw your e-mail, I let out a sigh of relief.

M: Well, I am very glad. And I understand perfectly the language issues. I want to talk a little bit about your interaction with the regional expert, Raquel.

R: It's wonderful. She is very patient. I have also learned a lot from her in the meetings, how she leads the group, how she interacts and it doesn't matter if she speaks in Spanish, English or Portuguese, she is fabulous. We even had the opportunity to invite her to one of the sessions with the group and we were all fascinated. One of my PhD students that wants to do research wants to stay with her. She is going to apply, if she has the time because we know she has a lot of work. She shared with us some of her research work. We were all fascinated with what she does, because I only knew her as the moderator of the groups. I really didn't know. I had seen a paper she had already published, but I didn't really know what her research areas were or how she worked or her projects. So, when we invited her, she showed them to us and everyone was fascinated. They asked for her phone number, her number, and her email. And she is precisely one of the people we want to invite for the second book to write part of the prologue or the introduction or something like that. Also there she introduced us to... What's her name? I think her name is Jill, who also speaks a little bit of Spanish. She's also great, wonderful and she has an impressive knowledge in the area. It amazes me and I learned, that with all the knowledge that they have, with all that they do, they are uncomplicated, very humble people. They have prudence and empathy. And I think that is the best thing that they have left me, the most important thing is that with all the [01:30:20] knowledge they have, they always adapt things to your level. That is to say, it doesn't matter if they have many titles and if they have much recognition, they always reach that human part of you and that has been very nice. Well, I am very happy with Raquel and with Jill, who I was also able to meet in one of the sessions. Because I only met her in the lab interactions, which was a very rushed. They come in a hurry to ask you questions and suddenly it's like... You don't know if you are answering well, but in

these meetings that our group had, there was more time, more discussion, a less rigid and much more open discussion. So I am very happy that they have contacted us.

M: And well, I was talking a little bit about the interaction with the sector expert, but maybe to talk about what has worked in this relationship...

R: For example, she gave us very good pieces of advice for researchers who are also working on similar projects here. For example, in other universities like UNAM, which is a very, very big university here in the country, but it is really very, very far away from us because Mexico is very big. How can I explain it to you. It seems divided into three countries: the south, the center and the north. We are very, very different. In everything, in the dynamics, the customs, the culture, and the people and precisely in how these issues are handled. So, the university she mentioned, which I believe was where she studied or did a research stay, recommended us a researcher and we tried to contact her, but in the end we found another researcher who was just as important. And well, I think it has been a nice relationship, right? The recommendation of bibliographic material has also been very important for us to review. And, well, always the willingness to tell us, "Write to me with any doubts or questions." And that willingness, well, I think it is also very much appreciated.

M: You spoke about the meetings between Raquel and the different projects in Latin America. Has it been positive to have your projects grouped by region?

R: Yes, because in one way or another, these are very similar problems. When we were invited from other countries, for example from Africa and others who went with a Japanese woman... I do not remember her name...

M: Yoko?

R: Aha. They were interesting, always very interesting, but they were a bit removed from the problems we have here in Latin America. It is different, another culture, other needs. If you look for it, there can be some kind of similarity, but we felt or I felt a little more attached to the problems in Latin America. The problems we have here in Latin America are very specific and pressing. When Canada entered and Brazil and Colombia entered, we suddenly all join together against the same issues. We are two. What do you call it? Those of us who make prototypes, but there are also those that are just one.

M: Stream one and stream two.

R: I entered in stream two from Latin America, and I also found them very interesting. We even reviewed much information. We were taking notes because it was this matter of analysis, of reflection. So we very often pay no attention to those reflective issues. We don't stop to [01:35:14] reflect on what is being done, how it is being done, and we quickly move on to the design of the prototype. So Stream One was, I think, the best way to value the importance of reflecting on the issues, and that was also very interesting. Even in our project we paused before moving on to the development to generate a deeper reflection, with a little more analysis and opinion. Because usually we also have the habit here of "author so-and-so says this. This other author says this. This other author..." And you never say anything. All the papers have too

many authors. So that's where we stop. We see that it is also very important to build your mindset based on what you see, what you observe, what you review, and that to reflect has a value. And when you share it with others, it has even more value. So I think that was interesting as a learning experience in these dynamics that have been developed within the project.

M: Have you been able to connect with other projects in your sector?

R: Ah, yes, we did try, but we made a pause because we are all making different kinds of progress. So we have not been able to, but we do want to invite Colombia and Brazil to the seminar so that they can share their processes with us... I have been very lucky because I enter these meetings and I see... I told several colleagues in my group that they could also enter, but the language issue always becomes a very, very tough barrier. So no, because they say things like, "What if they ask me? No, because I can't speak very well." So it always impedes the participation of other colleagues. But we do intend to... I even asked Raquel for permission to invite our colleagues from Colombia. For the time being, with the bulletins they have created, we have brought them to the group and we have been reviewing them and we are watching them. When our photo appeared there we were very happy. And do you know what was the most impressive thing on that occasion? That two of the partners, a man and a woman each had their child in the photo and they were there... You know what I mean? They are part of the group. You might be in the meetings and they are there with the children and they are like "wait a minute" and they run out with the child and bring him or her. It is very cool. I remember that I studied with my daughter and it was not easy. I took all the classes with my daughter and she was there and she grew up in this academy environment. Today my daughter is already thirty-three years old and she has all the information. She is not a designer, but she knows everything about design because she was in the classes, she was at school. She was there first when I was a student and then when I was a teacher. So it becomes this... And it's very nice because you see that they know a lot. She speaks three languages, she is very thoughtful, she is a doctor, and she also cares about society and the problems... Then we created, you know how? One of the members is the daughter of my colleague Leonardo and I saw her when she was two years old and now she is finishing university. So they are these monsters that we raise, that we make, that surpass us or are surpassing us with their way of working. They already speak more languages, they are already connected in other dynamics, and they are from other generations and see how they are growing up. Well, that is also great, that is very good.

M: That's lovely.

R: [01:41:52] Yes, so the generational change has also been interesting in the dynamics we have within the group, but at the same time it has been very enriching because we have or we try to cover the issues that might be interesting for us. But for example, one of the undergraduates brings a topic of anxiety in young people. And this means... That this topic is vital for her, it is relevant, it is important. And to tell her classmates how to take care of themselves, how to do it, who to go to, where to ask. And one of the oldest teachers in the group works very well and gets excited because sometimes we see them as our children due to the wide age difference. But with this kind of dynamic that arises thanks to the project, then suddenly we are all at the same level. So that is also very good.

M: That's good. We have talked a little bit about lab one, but I don't remember if you attended the session of lab two, the first session of lab two. And if it helped in any way also, if it was a help to the team, to you.

R: Yes, even in lab two we were already seeing some of the methods and methodologies for the development of the proposals. Kiara also presented a very interesting paper. And well, we are also taking information from there. I don't remember the name of the other professor, who was also very interesting. A gray-haired man from Canada. I don't remember his name right now. He also talked. Well, it is always important because it gives us a more structured panorama as I was telling you before. We can be doing many things, but exactly what we bring here to show it as part of the progress or as part of the process. So that is important because it tells us, "Well, from all that you did, just bring these parts because they are relevant." You may say, "Should I put everything or not? What should I put?" I tell you that sometimes you get lost. What's important? For you as a researcher everything is important, but then you only have 50 characters to explain and then you say, "Where do I start?" And I think these works help us a lot to give us an example of how we can start generating this progress, right?

M: I want to talk now, a little bit about the future, if that's okay. Talk about, for example, what is the next stage for this project and how do you think your project will evolve in the future.

R: Well, the second part has to do with the development of the prototypes that each member is trying to put together, to structure and the report. So we are going to try to put together this report and publish it in a book in both Spanish and English. Why in Spanish and English? Well, because it has more visual material, I think it can work. There is not so much to translate into the language and it can display very well the process of the work, of the design. And well, the results, the achievements that we are reaching. That would be stage two that we are considering or visualizing. Putting all this material together is one part. We are planning for a third stage, later on, to be able to carry out all this reflection we have been talking about, where the transdisciplinary of being able to visualize how the team worked... From how it started, how it was developed, to how it ended. But not only in the design product, but also in the individual aspect. All the things that affected, how they happened. Because although it is true, as I said at the beginning, that there is no specific process to address a transdisciplinary approach, I think that what we are looking for is at least to generate a process with a series of [01:47:48] strategies that we can recommend on how to work with a transdisciplinary approach. We don't know yet if we can arrive at the end of the day at a transdisciplinary approach or if it will remain interdisciplinary. But, well, we will be able to see this with the results of the second section, which is the development of each of the projects. In the page we are building, I think it will also be very well illustrated, because even the matters that are dealt with video will be much easier to review, as opposed to the book that will only have those screenshots incorporated. I think the web page will be another very good tool, right? At the moment we have been call to participate in an international congress in which we plan to present part of these advances. We have already been accepted. We sent the abstract and we have already been accepted. We have to work on the paper and on sending the book chapter. We also have another book coming up in which we are going to talk about transdisciplinary from beginning to end, but now with

examples and with less theory and more practice. And above all, it is also very important to invite the other work teams to the seminar to present these projects, I believe that we could be forming some very important networks. And if you also give us the opportunity of collaborating in the second book with a prologue or a reading or some... I don't know how to relate it... I don't know how to say it... How do you say it? A printing of the collaborative material and also connecting these networks. In this way the university, our institution, sees the impact that we are looking for or that we are producing so that it opens doors for us and then we can enter with some policy design or material or application of graphic material to the same institution or in the same city, with the government. So I think that once we have these materials, these products, I think it will be a very important reference for the institution so that they see the recognition from another university abroad and so that they authorize us or give us the green light to... Well, so that they see us with other eyes thanks to precisely what we have learned and the support we have from you.

M: Do you have any dreams for the future of these policies? Things you want, wouldn't you like to create maybe?

R: Yes, all the time, all the time. For example, I want more students from other institutions, from other countries to know that we work on projects, that we direct them, that we can advise them. Right now, we have a girl from Colombia and she just came in because of the project. I sent her the project, the draft with which we participated in the meeting and I told her "this is what we do. If you are interested..." So she said yes and we already have her signed up. She is doing very interesting work as well. In fact, she managed to publish in this first book. So that is what we are also looking for, that once we are able to spread this material, more students from abroad will become interested in attending or understanding the dynamics of the border and do it because... For example, the girl from Colombia said "this is happening here in my city, but we have already done this and this and this and this and this has been done." So what she is going to do is to come and see how she can use this group of women to learn what to do, or what can be done, or how to work, because the profiles might seem very similar, but they are not. So that would be my dream, that other students from abroad could come, with a master's degree or a doctorate, and with this perspective that they have, we could work with them. I would like very much that we could generate some [01:53:44] kind of network, a connection, that we could send students to them, that we could publish together. I know that everyone is very busy all the time, but well, we could participate in some congress. And well, you never stop being an academic, right? And you want to create an impact in academics, because I think I have always believed that it is a way in which you collaborate with society itself. If you create responsible, conscious professionals, concerned about their environment, then when they graduate, no matter where they work, they will have this way and this attitude of thinking and designing in a better way. And we are not at odds with advertising or marketing, there is simply an urgent need to address. And we find within design many tools to be able to support all these urgent and emerging issues that surprise us every day.

M: Perfect. Well thank you very much. If there's anything that you wanted to talk about that we haven't talked about within these questions that you had and all that... Do you have anything else to add in this time?

R: No, not really. I can't think of any. I'm having a class in a moment and well... But I'm here for whatever you need. Even if you remember something else later. No matter what time it is, we can add it to the recording and it is not a problem, trust me. I'll share it with you right now so you can get an idea of what I was talking about. I'll share with you the links and an example of some of the material we have already started to release. If they do not open, let me know and I will send it in another way or with another format, with another extension. So that you can tell me if it's understandable.

M: I'm sure it will be. Let's see. Well, I am going to turn off the recording. Here.



GENDERED
DESIGN IN
STEAM

ID65 - Design and construction of gender and eco-friendly fuel-less generator for female artisans in Nigeria

Interview transcript

Interviewee:

Ese Esther Oriarewo | Principal Investigator

Edo State Polytechnic Usen

Interviewer:

Dominique Marshall | GDS Principal Investigator

Carleton University

Date of interview:

22 September 2021

Transcribed by:

Way With Words

ID65 - Design and construction of gender and eco-friendly fuel-less generator for female artisans in Nigeria

Speaker Key:

DM Dr. Dominique Marshall

EO Ese Esther Oriarewo

00:00:00

DM Doctor Oriarewo, thank you so very much to do this. We're the 22nd of September, 2021, and this is the longest interview where we really want to learn about the journey of your project. So the first question I want to ask you is a very general one, and it's about asking you the story of this project, which every way you want to tell it. The story of this adventure of yours.

EO Okay. Thank you very much. We are indeed happy to have been granted this grant to run this project. The project is all about constructing an eco-friendly generator for female artisans in Nigeria [unclear] that in Nigeria we have epileptic supply of power and so everybody tends to make you do of alternative sources of power which most times is the conventional generator. And over time we will discover that the conventional generators are usually not gender friendly nor even eco-friendly.

Most designs of the conventional generators do not take into cognisance the female preferences and values. And so we choose to come up with this project, like I earlier said, to construct an eco-friendly fuel-less generator for female artisans in Nigeria.

00:01:53

This is aimed at helping the female artisans to be more productive in their work, to also boost their autonomy, to also help their family, and to a very large extent help the nation. You find that most of conventional generators we have they are either too heavy for the female to carry or the fumes they generate is hazardous to their health so that the mode of operation generally tend to be difficult for the female artisans to operate. And so because of that they find it difficult for most of the conventional generators we have in Nigeria operate via pull or push.

So we now came up, because our research team came up with this project, so let's see how we can [unclear] that eco-friendly fuel-less generator that will take into cognisance the preferences and the values of the female into consideration because most of these conventional generators will not take into cognizance the biological makeup of the female artisans. All they do is design products as it suits the male because most of the designers we have in Nigeria they are male designers so they design products as it suits the male.

Most times you will find women wanting to put on their generating set to power their business places looking for men to come and help them to operate the generator. So with this project we are hopeful that we will be able to be gender friendly. Whatever is suitable for the female to a very large extent will also be

suitable for the male.

00:03:43

Now, what did we do to be able to achieve our objective? We had to engage a multi-disciplinary approach whereby we took into cognizance the end-user's needs. How did we do that? We went to meet them, discuss with them, interact with them physically and virtually. Then we gave them questionnaires. We had strategy interview with them. Then from them we were able to know their needs, their preferences. With the [inaudible] we wanted to balance the equation [inaudible] gender friendly [unclear].

We interviewed both the male and the females. So after the interview, what we did we had to analyse their needs, their specific areas of needs. We brought everything together and we ranked them. We did a general ranking of the male and the female together, then thereafter we saw that we had discrepancies where the male folks were comfortable with the mode of operation of most of the conventional generators. The female folks they complained bitterly that the mode of operation was difficult for them and so on.

So what we now did again, because our project is centred more on female, we had to rank only the female needs again and we now discovered that most of them had similar needs like weight, the colour, the noise, the mode of operation. So we now had to till our design towards the preferences of the female because, like I earlier said, what is good for the female they male can equally accommodate it because of all their own biological makeup also.

00:06:00

So we did this through the voice of the customers. We had to cluster them together. Then we had a focus group who further analysed these needs for us because we needed to do that for us to know how to design the project, design the work. After we were able to get the analysis down properly, we had to expand our team to include more experts, to include more consultants that are experts in certain fields.

We need a fabricator. We needed someone who is an expert in stimulation. We needed someone who is an expert in ergonomics and all that fields like that, and we brought them all together to help in the design phase. As we speak right now we've gotten the pattern we want. We've already designed the project. We are evaluating needs to see actually it meets the needs of the people.

Before now in the first phase of the project we had to organise a large stakeholders meeting. After meeting the stakeholder associations individually, we had to hold a large stakeholders meeting to intimate them about the project, to let them know about the project because it's not so very common in Nigeria. Of course they were all happy about it because they felt it will help and reduce the environmental hazards caused by the conventional generators, and they also felt it's going to make their mode of operation equally very easy for them. Ease their stress of operating conventional generators.

And we're also to bring in the female artisans to make them feel the need to participate in the projects, and we were surprised with the enthusiasm with which they actually turned up and they joined in the work.

00:08:13

It was a very encouraging one and over time we've been communicating with them because their preferences matters to this our project and so we tried to carry them along. We did that in the first phase. In the second phase of the work we went through the data analysis, which I've just explained earlier, through strategy interview and questionnaires. We got that done. We got that done and we were able to know and to transcribe the generic characteristics and we set it up.

Like I told you earlier we had our experts, our team of experts are doing that for us to enable for us to see if it needs... We just did an evaluation last week here and we discovered that it's still kind of noisy and that is one of the preferences that the artisans wanted. They said they want it noiseless. It's a noiseless generator. So we had to take it back again to the workshop to work on it again. So that is how far we've gone with the project.

So we're hopeful that soonest we will be done with the project and we will be able to bring something that will be useful to not just the female artisans alone, though they are the main end users that we are targeting. We have to target end-users. That it will be useful to everybody in Nigeria due to the epileptic power supply that we suffer here. It has actually not been easy doing the project because we've actually encountered a lot of challenges. This project actually started in 2019. In 2020 COVID-19 came up, the [unclear] pandemic came up and we had to... It affected us a lot because physical meetings were restricted.

00:10:12

There was a lockdown. People couldn't go out, so we had to start engaging our artisans, our participants, our projected end-users through Zoom meetings like this, through letters, and maybe their phone calls and WhatsApp messages to intimate them all we're doing. So we're actually happy that before the actual lockdown in March we were able to organise a stakeholders meeting in January for which we intimated them.

Then also the other challenge we have encountered in this project is the rate of illiteracy of the artisans because the artisans most of them are not well schooled. Communicating with them like I'm communicating with you now is a big problem. It's a very major problem for us, and so we had to actually try to come down to their level to structure the interview as simple as possible so that they could understand what it was all about so that we will not lose the essence of the project. But to a large extent we were still able to get across to them.

Another challenging [unclear] was the insecurity problem. Because of that we had to engage more research assistants because we chose three senatorial districts we all wanted to work on in Edo State. Those Edo south, Edo north, and Edo east. So to avoid exposing our original research assistants to the health hazards of the COVID pandemic and the insecurity challenges we were experiencing in Edo north and Edo south, we had to engage new ROAs there. We had to engage new ROAs. Can you hear me? Hello? Can you hear me?

DM Yes, I'm there. I'm there.

EO Okay. All right. We talked. We educate them again about the project and we talk

to them their zone how to go about the data collection.

00:12:42

So we're engaging... We had to add more ROAs to help us do the data collection because we could not expose the original ROAs we engaged in Benin to go to those areas because of the insecurity that was going on there. And so they did the work and they [unclear] the data down to us. So from those data we were able to analyse and get the preferences of the targeted end-users with which we are working with right now. And our team of experts are actually doing a great job trying to ensure that we finish the work within a stipulated time. I don't know if I've been able to answer your question ma'am?

DM Very much so. Very much so. You can make that story as long as you wish. Is there anything else you want to add? It's very interesting. I can listen to that forever, otherwise I'll ask you some more questions.

EO Okay.

DM You okay?

EO Go ahead.

DM So I'll go back to some of the stuff you've done now because you've covered the whole thing which was really nice to hear because it's better to reading your reports. It's even better. So say you go back to the story you told me and think about how that fits your own professional and your own life story. Where do these preoccupations which you put in your application two years ago, where did they come from?

00:14:18

How did you come to think that that would be a good project in your own professional life or maybe in your own life as well? So now I don't see you, but I... Maybe your camera is off now.

EO I'll come in. Is there... Sorry. Can you see me now?

DM And I want... I didn't tell you that earlier, but I want you to be sure that if you want to have a break or you need to go somewhere else and come back, I'm completely happy to interrupt the interview at one point, so feel free. Yes, I can see you very well. So what I was asking is, the project that you just told us the story of, which is wonderful, can you make connection between arriving at that project and your own professional life and your own personal life. Like how on earth did you dream of that project two years ago?

EO Okay. Thank you very much. I am by profession a lawyer and I'm also... I'm legal officer of my school Edo State Polytechnic, and I also double as the director Centre for Gender Studies. As the director for Centre for Gender Studies and Women's Development, I interact every now and then with the female group. In that centre we try to see how we can empower the youth and the women. So in my interaction with them we got to discover that a lot of them really want to be empowered. That they're having challenges, financial challenge and all that.

00:16:08

So we tried to see how we can give them short courses, certificate courses. That we help them to stabilise and help them to find their fit in society. And in my course of interaction with some of them, we discovered that the major problem that they have, because most of them they're not well schooled, just maybe we teach them how to make hair, we teach them short courses like baking of cake, pastries, we did bead making and all that stuff.

We discovered that most of them the complaint they have is power because in Nigeria we actually suffer epileptic supply of power. Right now as I talk to you now, I don't have power supply in my house. I'm using a conventional generator, and if I open my window you will hear the noise of the generator. So I have to block my window and shut the door so that I can interact with you to reduce the noise of that conventional generator. And so we talked about it.

When we heard of this IDCR grant, what can we do to empower these people? What can we do as a research thing to improve the lives of these people, and we thought of power. If these people have a working alternative to power supply, a good one at that which mode of operation is easy, which is fuel-less, because the cost of fuelling is expensive like most of them complained. The cost of maintenance is expensive like most of them complained. Because after we've trained them, I will want to set up a small business for them, the first thing they will ask you to do, ah no power supply here, we need a generator. We need a generator to power the place.

00:18:17

So when I thought about it I said this will help our people, not just those in Usen, but those also in [unclear] and even Nigeria across. So that was how we came about this project topic because we feel is one of the major needs of our people and we feel that it's a laudable one because to a large extent it will help our people. Thank you very much.

DM

Well, you just told me your own generator so that's your personal thing. That's your own experience as well that generators are difficult. You're not an artisan but you've experienced that problem yourself. Okay. Very nice. My next theme there is which community are you thinking about? So you spoke about your centre and then you spoke about Nigeria. And then you spoke about the one region in particular. So when you think about serving the community, which community do you have in mind? How do you think about the people that this project is serving and coming from?

EO

Thank you very much. What we did as a team was to look at... Edo State, for example, is divided into three senatorial districts. So from the three senatorial districts you have Edo north, Edo south, and Edo east. So with three senatorial districts, we selected one local government from each. From Edo north, for example, we picked Auchi. From Edo south we picked Ekuma [?]. Edo central. Sorry. Edo central we picked Ekuma.

Then Edo south we picked Benin and Usen because Usen is the... Edo State Polytechnic is situated in Usen.

00:20:19

So Usen became the fourth community that we put among the other three communities. So it was kind of a sampling. Kind of a sampling. So those areas were the areas we picked and did our research [inaudible] therein where we got data that we analysed which we are doing the project design right now. Thank you.

DM Okay. Very good. And you spoke... So within that theme of community you spoke about the flexibility of your project to try to speak to people who were illiterate in a simpler way. So I am not familiar with the language situation in Nigeria, but did you have to speak in many different languages? How did that go for interacting with these communities?

EO Yes. That was the other challenge we had. Like I told you earlier, most of them are not well schooled, they're not learned. So because of their illiteracy level we had difficulties during the interview. So most of our researchers complained so we had to tell them speak to them in vernacular, that is their native language. We spoke to them in their native language. Those [unclear] later have to repute, we had to ask people with [unclear] those ones because they were based in that vicinity.

They were based there so it was easy for them to interact one on one with them to get the information required for the project else we would have lost. Actually a challenge but we were able to because we had to come down to their level and speak in their language that they will understand. We even spoke to some of them in broken English, what we call Pidgin English in Nigeria.

00:22:10

We spoke to those that could not understand Pidgin English in their native dialect. We recorded them. We used people that [inaudible] their language to talk to them. That was what we did.

DM And that's how you hired research assistants that could speak to them directly. Is that what you said?

EO Yes.

DM Okay, good. So next theme. I have my list of themes here. So you're a lawyer by training. You have a centre where you were working with people who have also other professions. So now I would like you to stop and think again about your whole story and reflect on how you put your team together, the contribution of different disciplines, and if I remember well what you said a few minutes ago, you even had to change a bit and add different people to your team to address the needs of your project. So can you talk about this how different disciplines bring different thing to your project?

EO Yes. We are a team comprising of different professions because like I'm a lawyer by training. I'm also the director for Centre for Gender Studies, but I'm not an engineer. Constructing an eco-friendly generator is the work of an engineer, and even engineer he has various fields. So among our team we have to look at those areas where we will need experts. We needed an expert in mechanical engineering. We brought in one. We need an expert in electrical engineering. We brought in one.

00:24:01

We needed an expert in gender issues also and education, which was also very good, apt in the research. We had to bring her in as well. We needed an expert in sociology that will help us search the feelings of the people. We had to also bring in one. As the project work continued we discovered that over the stage of the design we discovered that we need experts also that are fabricators, so we had to also bring in such experts. We also got to the stage of stimulation, we thought that we needed experts in that area because if I tell you I can do the simulation I will be lying to you. So we had to bring in experts that could do that job for us.

So that was how we just gathered all the team that we're working with based on their professional skills on how it will help the project we're working on to be successful. Thank you.

DM So can you tell me how the, maybe, how the sociology person contributed? Why were they there and what did they help the project to achieve?

EO They did a great work there because during that time meeting the artisans, some of them were not very open to us. So we had the stakeholders meeting. We had to visit artisans association one after the other. So some were not really friendly to us. So the social worker amongst us had a way with them and you find that they started opening up to us. And those that were like, what are they doing, they've come to tell us stories, they welcomed us. After she spoke to them, explained to them, she was able to psyche them up to make them understand that this work is not a child's play.

00:26:14

And also during our data collection, she was also able to come because in Nigeria we're full of suspicions, superstitions. We have great superstitious belief that, for example, if I'm looking at you now, you're looking at me, so then they allow us to... During the data collection they were like, what are you going to do to my picture? No, no, no don't video me. Okay. You're recording me now, I'm not worried because I know what it is. [Unclear]. She was able to go round them, talk to them, calm them down, make them understand because that's her training. Make them understand that this is a project for everyone to benefit, not just the research team but also them.

And so some of them understood and they allowed us do the interview with them. So to a very large extent she was of great help to the team and she still is of great help to the team.

DM Very interesting.

EO Thank you.

DM If you take it in the other direction, as you were collecting all that stuff from these people in order to put your project together, in your final product that you're doing, do you see some knowledge of the women you interview that made it into the product? How does the traditional or the local knowledge of these women is part of your product or did you make some of that knowledge in a way more visible by doing all these interview? Are you counting on the knowledge of these women?

00:28:00

Do you understand my question? I can't hear you very... We're broken now. Can you hear me? Can you hear me? That's broken now so we'll wait a little for the connection to come back. Hello?

EO Yes. I don't know if you can hear me.

DM I can, but I lost the connection. So I'll ask my question again. Is that okay?

EO Okay. Yes.

DM So in your project is the knowledge of the women you interviewed or the men and the women you interviewed, is it now part of your product? Is that bits of knowledge that come from your community that is now in your product?

EO Yes, definitely. It's part of our product because from the data we collected we had to analyse their preferences and their values which we called the voice of the customers. The specification we got from the data is what we are using in our design because we are not just going to... We have to take into cognisance the fact that what is peculiar to the fashion designers, for example, may not be a peculiarity to the [inaudible] association. So we have to talk to each of them individually and try to write their preferences and still have a design. So their preferences in this design. Are you still there?

DM Yes, I'm still there, but I put the camera off so I can hear you better because it's broken. So I thought if I put my camera off for a minute maybe then the connection will be better.

00:30:18

So can you repeat the last 30 seconds because it was all broken? So you said you had to listen... You said the fashion designer I think at one point. Did you?

EO Yes.

DM Can you repeat that?

EO We actually put into cognizance there are various preferences because we discovered that in the course of interacting with them that what was peculiar to the fashion designers, for example, was not the peculiarity to the [unclear] associations. So we had to find a way to bring all their preferences together, rank them, which we called the voice of the customers, and from there we're able to arrive at what we're using, the general characteristics we are using now to design our projects.

DM Marvellous. So I vanished. I was nodding away. You couldn't see me because I want to see you well on my screen. So can you give me an example of something that you can think about that you heard and made its way to your product?

EO Sorry, I didn't get that question. You broke along the line.

DM Could you give me an example of something you heard from the community that actually made it to your product?

EO That made it to our product? I didn't get the last part of the question please.

00:31:52

DM Okay, I'll try again. You said, for instance, that... Do you have an example of something that you heard in your interviews that actually made it to your product? For instance, you told me about the noise. People were complaining about the noise. So do you have some suggestions or some ideas that came from the community that made it to your product?

EO Yes, a lot of ideas came from them. Actually what we did or what we are doing is to get information from them. The essence of the stakeholder's meeting we held with them was not just to intimate them about the project. They were also to enable them tell us their own preferences. And in that stakeholders meeting there was room for questions and answers. They gave us their own opinions. They gave us their own ideas. Then when we went for the data collection we were also able to get their own preferences again and their values, their preferred preferences for the project we are working on.

For example, the fashion designers they were of the opinion that they want a generating set that could power their iron, which means their pressing iron. That's what they wanted because they work majorly with their pressing iron. And so we had to go back and look at what are those things that we need to add to our design that can enable them use the generator to iron the clothes they're making. [Unclear] but they need a machine that could go there into the tires. So we had to also look at those things.

00:34:01

I believe there's an engineer here now that will be able to tell you the terms that they use. I'm talking to you now just a lay man here that we've put all those their ideas and their suggestions into cognisance while we're working with them because actually that was our aim of meeting one on one with them. That was also our aim of holding the larger stakeholders meeting to enable us gather this information from them because it's their information, the information we gather from them, the ideas we gather from them, the suggestions we gather from them, that we came back and clustered together and [unclear] to start our own design. Thank you.

DM Do you hear me well now?

EO Yes, I can hear you.

DM Okay. That's a better moment. Okay, good. That's excellent. Thank you so much for that. I wish I could see a picture of your pressing irons there and how that works. Next theme there, when you were talking about a technology that is thought about by women because usually it's men who design things, and then you said later sometimes it serves also men. This new product is also useful for men.

So here I wanted you to stop a little and think about these ideas about men and women, and you also talked about young people, and tell me how when you entered that project you thought of these questions of gender, and if your project confirmed these notions or if it might have changed them a little to reflect generally about this?

00:35:52

EO Well it hasn't actually changed. I would rather say that it has become a work-in-

progress for us because in the course of doing the design, meeting with the various artisans groups, discussing with various stakeholders, we discovered there are various needs and there are various preferences which we have put together. What we are actually trying to design will be useful for both the male, the female, and even the youths because the mode of operation is going to be easier compared to most of the conventional generators.

That's what we actually intend to do later on. When we're done with the design and the fabrication, we intend to evaluate our design with the conventional generator in the market. We want to call again that focus group to engage them, display the product before them and let them have their opinions again. So it is a work-in-progress that is actually involving everybody.

It has not actually changed our view but rather it has helped even improve on our [unclear] design because we've come to realise that most of these people actually do need a design that is gender friendly. Because even some of the male complained that the women folk they disturb them with always asking them to come and help them figure out the generator, asking them to come and help them operate as they put it on, and switch it on and all that. So I think it's something that will suit everybody irrespective of age and irrespective of gender. Thank you.

DM Very nice. Other question, as you were doing all this you had some people participate in making the thing.

00:38:08

You actually had people make things with you or look at how you were making things. Can you talk about this? How making it or demonstrating it or showing it is part of your process?

EO Sorry, I actually didn't get that well. Can you tell the question again please?

DM Yes, sure. Do you hear me okay?

EO Yes, I can hear you now.

DM Okay. I'll stop the video so maybe you can hear better. As you were doing all this, you made things in front of people. You brought the product, you made demonstrations, you actually tweaked it in front of them. So can you speak about that process of making things and how it was part of your project more at length?

EO Okay, I think I get your question now. Well, I will not actually be able to answer that question accurately because the engineers who are the product designer, who are the experts in that area would have been in a better position to answer. But however, I will say that in the process of doing the design we had some of our students around to watch as the product was being designed in the lab.

And some of our research assistants they were also there watching how a product designer and the engineers were coupling the things together with a lot of materials we had bought, the pulley, and all what not they bought which they've used to design the product, and can actually use the engineering technologies they used now.

00:40:09

They can know that while they were doing it they were taking notes and they were observing. Thank you.

DM Did you actually watch some of that or were you away when they did it?

EO I wasn't actually there all through because I was also busy with other things. I wouldn't lie to you. I wasn't there all through, but at some point I was there. At the beginning initial stage I kept [inaudible] and had other things I was also pursuing on my own because we are also going to... For this work we are also going to do some publications as part of our research dissemination. So we tried to divide ourselves to see how we can fast track the project to enable us finish within time. So I'm also busy with other things but I'm following up what they are doing and I know that the work is ongoing.

And even just... Today is Wednesday. I think on Monday one of the experts from simulation tried to put on the gen and he said he was still hearing some kind of noise. So he called to say so. So we had to take it back again to the lab to give up the lab. So that was [unclear] evaluation. So we evaluate. If it's still not up to specification, we go back to the lab again and continue to work on it until we meet the specification that we are targeting. Thank you.

00:41:44

DM So do you think that these engineers and these design experts who are used to work with the users to make their product, when the work with a gender lens do you think they work differently or it's the good old methods, or did they have to adapt because it had to do with gender?

EO We actually held a meeting with them and we told them about all what the project was all about. As a designer you have to meet specifications and you have to... We are trying. What we tend to do as a team is to make designers become gender friendly in their designs because all of the designs we have are majorly masculine sensitive. It's geared towards the male folk. They don't consider the women folk. So we taught them all these things.

Like I told you, the product designer right now wasn't initial part of the initial team. We just expanded our team in the second phase and brought them in. So we had to hold another meeting with them to educate them on what we want and what we are after and they saw reasons with us and felt yes it's true. It's true product design has to be gender friendly and they have to take into cognisance the female folk, take their biological make up in designs. And so they agreed with us. They agreed with us.

DM Okay. Now you said a lot already about how you had to adapt the project because of the pandemic of COVID-19. Is there anything else you would like to say about this? Anything you haven't said yet about how the pandemic changed your project?

EO Well, it's actually like I said we have to increase our research assistant because we could not risk the ones that we'd already trained in Benin here.

00:43:56

The pandemic also slowed down our work a bit. I must confess it slowed down our

work because movement was restricted for over three months. There was lockdown for that three months. Even when it was lifted we could not actually do much work because people became scared of large gatherings. There was a ban on large gatherings. Initially we targeted in our proposal we targeted 300 participants for our stakeholders meeting, but we were not allowed to use such large number of people. So we had to cut down.

We were mandated by the state government to cut down to 100 because the hall we rented for the stakeholder meeting ought to have been above [unclear]. I think 500 capacity sitting. The policy that came out due to the COVID-19 pandemic was that the hall should not carry more than 100 participants. So that also cut down on the number of participants we had originally programmed and reduced to just about 100 participants. We had to ensure there was social distancing. We had to ensure that people use their nose mask. We had to ensure they wash their hands properly outside. That the COVID-19 protocol was duly observed.

So those were the challenges, restrictions and obstacles the COVID-19 pandemic actually brought our way and we could not now meet physically. Even as a team during the lockdown we couldn't meet physically anymore. We had to start meeting online through Zoom, through WhatsApp. We had to start meeting online.

00:45:41

DM Just one minute. One minute. I have to stop a minute.

EO Okay.

DM I had a tea delivery from my husband is why I stopped.

EO Okay.

DM So you had to have a whole protocol of sanitation. You diminished a number of people. It slowed down the project. Carry on. Sorry I interrupted you there.

EO Yes. Is all right. Is okay. And we could not actually meet again physically. Meeting physically and meeting virtually there's a lot of difference, a whole lot of difference. So we had... Even as a team... I'm talking even as a team now we had to start meeting online because of the lockdown. We could not just allow the project to just lie there because of the lockdown, so we had to change our meetings from physical meetings to online meetings mostly.

Well, we are happy where we are today especially with the pandemic we are at the stage we are now. It has given me a lot of joy because at that stage during the lockdown I was like whoa, how are we going to meet up? How are we going to deliver? How are we going to finish this project? And I'm really excited that we are where we are now despite those challenges we encountered. Thank you.

DM So another set of things I wanted to ask you is about being part of the programme gender designers team.

00:47:47

How have you interacted with it, how it shaped your project, different interventions at different times. So the history of your project and the more general gender designing team.

EO [Unclear] that the gender designing team has actually helped change my perception about a lot of things. I must confess I must give credence to them because before now I've not actually take into cognisance that most designs are not gender sensitive until we started working. We got this proposal, started working the proposal, and it dawned on me that yes, because before now I just thought everything gender has to do with the gender based violence and gender abuse, gender intimidation. I actually did not align my mind to designs.

So working on this project has actually made me realise that even in design designers have to also, proper designers also have to be gender sensitive. That it's very important that they have to be gender sensitive. They have to be gender friendly. They have to look into gender issues in their designs and not just to just fabricate and then design products just like that without taking into consideration the preferences and values of the end users.

It has actually to a large extent brought it in our horizon, and I think even that of my team members. My team member during the data collection were interacting with some female artisans and you will hear them telling you it's so stressful having to drag, having to pull.

00:49:56

It's so stressful having to lift, push the generator or to even lift it by themselves and [unclear] people. You see. [Unclear] has actually to a very large extent helped me to realise that gender goes beyond just gender-based violence, gender-based intimidation, but also has cut across designs. Hello, can you hear me?

DM Yes, very well. Thank you. Yes.

EO Thank you.

DM So what about... That's a marvellous answer. What about more specifically? Now you've said it like a general as an idea and as a way of working. What about your practical relations with the project, like the gender sector expert, the regional expert Emmanuel, the workshops, the report? Can you tell me about your practical relationship with the whole programme? Can you hear me? Okay, we're frozen now. One, two. One, two. Can you hear me?

EO I didn't get that question.

DM Okay. I can repeat it. But you are frozen so maybe we have to wait?

EO Yes, I can.

DM Okay, good. Shall I repeat then? Shall I repeat my question?

EO Yes, thank you.

DM What about your practical relations with the project?

00:51:40

The sector expert, the regional expert, the workshops, the reports, whatever you want to say.

EO Well, if I get your question right, we've been working closely with the regional

experts. In the first phase we had a lot of lab meetings. I think we have about three lab meetings via mural, and we were taught a lot or we discussed a lot about gender [unclear]. We discussed a lot about gender products. We discussed a lot about the product designs, and from time to time we've also been getting messages from Carey Grace, who is the project coordinator I think so, and she actually has been carrying us along with the [unclear].

Even from time to time other project teams have organised workshops for which we've been invited and some that we remember to join we hook up. At times network will not be friendly with us to join them. As we speak right now there's even another mural workshop we are planning for in October next month here. I'm sure we're still going to be taught more about the JDS esteem issues. And we've actually been interacting.

The lab workshop we had the last time actually brought us together. It helped us to learn from other people's work to see that it's not just only in our work that it's actually gender related to design, but there are other areas where designers also have to be gender sensitive. Thank you. I don't know if I was able to answer your question. Hello? Hello?

00:54:02

DM Yes, yes, yes. It answered my question very well, very well. I was wondering, did you have interactions with Fred the sector expert from Carleton? Did you meet somebody from Carleton, and engineer from Carleton Fred Afagh or did you ever meet them?

EO Well, I know that there was... I can't remember that right now, but there was one we met, I think he's from Africa or so. I don't know if he's the regional expert. I'm having issues differentiating between the regional expert and this sector expert. I think you're going to forgive me there. I'm having issues differentiating them. But we've interacted with them. We interacted with them. We did interact with them.

DM And you don't remember anything special there where you would have learned anything or the exchange was fruitful? You remember more your exchanges with Emmanuel that they were more important initially. Is that what you're saying? So your interactions with the regional expert were more important than those with the sector expert?

EO Well [unclear] that question now. Like I said earlier I actually cannot... I'm having issue now differentiating between the regional expert and the sectional expert, because the work we did in lab only the lab workshop I think they were both there. We interacted with them and some other researchers from DTS were also there.

DM Okay, good. So now is the last part of what I want to talk. I want to talk about how you think about what you've done now in the future. The follow-up to this. So you said that you were thinking of patenting this thing.

00:56:37

How are you thinking about this project later? Where is it going once you finish this part that we're doing together? What are you thinking?

EO Actually we are thinking of publishing the research findings so that others can also

learn from it. As an institution we are involved in publications. We do conferences, seminars and workshops. So we tend to publish the research findings in relevant accredited journals either international, national or local. We also intend to write up papers, seminal papers to present in conferences so that others can also learn from it.

So we don't just intend to just finish the work and hide it in our lab. No. We intend to present our findings just like, like I said earlier, we present the findings via publications, conferences, seminars, and workshops. We put it to writing so that other open researchers also can learn. Research is a continuous process and possibly even improves on what we have done. Just like we are intending on improving on conventional generators right now, they can also improve on that too.

And we intend to also synthesise, create an awareness about the design to the public. Let them know so that they can request for the same, make use of them in their homes, in their business place, in their offices. Thank you.

00:58:45

DM And Dr. Oriarewo, if I was asking you to dream, we don't know what we will do at this end, but to dream of ways by which this project could continue or people at Carleton could support and encourage or help you continue what you started, what would you dream about? I've lost you now. It's frozen. Can you hear me? Can you hear me? Hello? Hello, can you hear me? I've lost you now. Can you hear me? No. Hello?

EO [Inaudible]. Can you hear me?

DM I can't hear you.

EO I can hear you.

DM Okay. I'll ask my question again.

EO I can hear you. All right.

DM I'll ask my question again because I lost you for about a minute. If you could imagine with us IDRC and Carleton and you, possibilities for this programme for the future. We don't know if we will do anything after the virtual exhibit, but if we were to think of ways by which we could continue some of what we're doing now, what would be helpful, supportive and encouraging at this end?

EO Sorry, I didn't get that question.

DM Could you think of ways by which IDRC and Carlton could in the future help you do things out of this project?

EO Do things like how?

01:00:50

DM You want me to repeat that?

EO Yes, please. The line is cracking and it's breaking.

DM It is, is it? Are there ways by which Carleton and IDRC in the future could help this

project to continue or to grow?

EO I get the question now. Yes. They've done so well already. [Inaudible] and there are more ways they can also help the project to grow because research, like I said, is a continuous thing. Wherever we stop now, because actually what we are doing is a prototype, wherever we stop now IDCR or Carleton can further release more grants, more funds to enable us to continue to mass produce the project for consumption of the people. And it will also help us to publicise it, create awareness about it. Being an international institution that will give it more weight. It will attract more people to it. Thank you.

DM Thank you for that. Do you think that as you did all this over the last year and a half, you have put together some new methods of working?

EO Sorry?

DM Have you put together new methods of working?

EO Definitely, yes. Definitely, yes. I'm an optimist as a person, so during the challenges we encounter like the COVID-19 [unclear] and all the lockdown we encountered, it will have to make us learn how to get new ways of working. Like I told earlier, we've learned how to use Zoom. I'm talking to you with Zoom now. This taught me how to use Zoom. I didn't know how to use Zoom before now.

01:03:18

So throughout the lockdown we needed to meet to work. We learned how to use the mural during the lab workshop. So that was very difficult for us. They will learn how to use it and today we use it in the office. It's making work easy for us. We learned how to communicate via WhatsApp more. Before it was just only just to post picture and all that, but now the project has helped us to learn new ways of working, new method of working.

The project has also brought us close to people. You now begin to see that people are different. People have different perception about things. For example, during the data collection some people practically walked us out of their stores. They walked us out of their shops. Leave, leave, leave here. What are you doing? So we went back and we mused what we do to make this people accept us? We want to make a customised face cap and maybe a customised t-shirt. We made ID cards.

So we wear it. We go, you see us with it. We now learned how to smile. It taught me how to come down to their level. Forget that I'm a lawyer, forget that I'm a director and come down to their level. Even when they're shouting you laugh with them. Even when they're telling you, don't record me, I don't want to be recorded, don't take my record, my voice to the [unclear] and all that, I learned to laugh over it.

01:04:52

You see it helped me a lot because I started seeing people from different perception beyond my office. In the office we're all learned now so we speak in good English, we try to practice work ethics there. But with the data collection work ethics does not play there. It's just like a street thing. If they don't like you they

strip your leg out of your shop. It taught me patience. It taught me tolerance. So it has actually helped our method of working. My research members will also attest to this.

At times when we think about it when we're having our meetings we will just laugh. It makes us laugh to remember what we went through. It has really taught us patience. It taught us how to tolerate people. It checked my frustration about people and broadened my horizon about relating with people. Relating with patience to listen to them, patience to deal with them. Thank you so much.

DM I have finished what I wanted to ask you. Is there anything else you would like to say or you think I've exhausted what you would like to say about the story of your project?

EO I want to appreciate you for this time. I actually enjoyed this interview with you. Thank you. Actually I was scared if I will be able to communicate properly with you, if I will hear you well. But I want to say I'm sure you've tried to also come down to my level so I can understand you well. So I want to say thank you, Marshall. You've done well.

01:06:40

And I also want to appreciate Carleton University and IDCR for giving us this opportunity to meet you, to meet the other team members in the research team that we have now come to know, and for enabling us to have an idea about this project. You know once [unclear] research, as a researcher the more you research the more you acquire more knowledge. You meet new people, you have more networks, and you get to know more. I actually want to appreciate them for this opportunity, not just only for those that are releasing the grants, no, but for also giving us an opportunity to learn, to grow in our horizon. To actually spread our tentacles.

We are indeed grateful to our institution for [inaudible]. To all the stakeholders, the state government, my research members, we are indeed grateful to everyone who has in one way or the other supported us. So it is our hope that we will be able to deliver within the stipulated time. To do that we are assiduously working hard to ensure that we meet the stipulated time, the time specified for the project so that we can deliver at the appropriate time. We are indeed grateful.

DM Do you hear me okay?

EO Yes, I can hear you.

DM So to finish, two things. First the pleasure and the thanks are mutual for me and my team. To learn how you work and to see what you're able to is extremely valuable. It's been a pleasure and I hope it will continue. The other thing is, are you able to come to the workshop on prototyping later this month?

01:08:53

Did you see the announcement for that?

EO No, no I've... Sorry, I didn't get that question.

DM There is a workshop.

EO The last question please.

DM There is a workshop on prototyping coming up in a few weeks. We hope you can come to that. Did you hear me? Can you hear me? Hello? Hello? Okay, that's not good, is it?

EO Yes, we are aware. We're aware of the [inaudible].

DM You're coming?

EO I can hear you. I can hear you.

DM Are you coming to the workshop in a few weeks on prototyping?

EO Coming over to Carleton, to Canada?

DM Yes. It's a workshop. Look at your emails. You've been invited. It would be marvellous to have you over or to send one member of your team.

EO I will check my email.

DM That would be great.

EO We'll look into that.

DM So I will say goodbye Dr. Oriarewo, and it was a pleasure to meet you.

EO Same here.

DM Okay. Bye-bye.

EO It was nice. My best to your family.

01:10:22