Expanding the Music Circle:

Bridging Distance and Difference Through Improvisation

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March 14, 2023

Introduction

Executive Summary

This report, submitted to the National Arts Centre Orchestra in 2023, proposes two strategies for more equitable and inclusive musical participation. Expanding the Music Circle through Networked Improvisation (2021-23) is a SSHRC-funded research project inspired by the social isolation imposed by the pandemic, but the inclusive strategies we explore remain relevant in a post-pandemic world.

- · *Creative improvisation* is a strategy for co-creation across difference.

- · *Networked music* is a strategy for collaboration across distance.

Networked music allows people to play music together from different physical locations. Creative improvisation is a flexible genre that readily adapts to the technical limitations posed by the internet (e.g. *latency* - time lag, and *packet loss* - glitchy sound and image). Improvisation is also adaptable to different skill sets, bodies, and musical tastes. Used separately or together, these strategies offer the possibility for musicians to interact creatively with people from dramatically different social and cultural contexts.

The purpose of this report is to convey the lessons we learned through empirical research conducted in collaboration with orchestra musicians, special music educators, and adults with exceptionalities in May-June 2021. We hope that the tools we created and the insights we gathered will be useful in future iterations of the Music Circle program.

Documentation of Expanding the Music Circle is located at
https://carleton.ca/mssc/research/expanding-the-music-circle-through-networked-improvisation/

Background and context:

The COVID-19 pandemic exposed deep inequities and imbalances in our society, and music was no exception. Musical participation, widely understood as a key component of wellbeing, became suddenly unavailable to most people in March 2020 - at least in shared physical spaces.[1] Professional orchestras faced empty concert halls and even playing in a room together was considered potentially dangerous (Public Health Ontario 2020). But for people with exceptionalities, some of the most vulnerable people in Canadian society who already face significant barriers to musical participation, social isolation became acute. (We use the term exceptionalities rather than disabilities to emphasise this community's rich creative potential.) Since 2012, through a partnership with the Lotus Centre for Special Music Education (LC), National Arts Centre Orchestra (NACO) musicians have presented music programming for people with exceptionalities in the Music Circle program (MC).[2] Expanding the Music Circle (EMC) is a research project that explores strategies for addressing musical participation in times of social isolation.

Funded by a Partnership Engage - COVID-19 grant from the Social Sciences and Humanities Research Council (2021-23), EMC brings together three partners: the Lotus Centre for Special Music Education (LC), the National Arts Centre Orchestra (NACO), and the Sonshine Community Inclusion Centre

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[1] For information on participatory music and well-being see Creech et. al, 2013; Pitts, 2005; Turino, 2008.

[2] For information on the Music Circle program see https://nac-cna.ca/en/musiccircle

(Sonshine Centre) with music researchers from Carleton University's Research Centre for Music, Sound, and Society in Canada (MSSC).[3] The research team comprises:

- Ellen Waterman (Director, MSSC; Helmut Kallmann Chair for Music in Canada, Carleton U.; co-applicant)

- Erin Parkes (Founder, Interim Executive Director, Director of Research and Professional Development, LC; co-applicant)

- Jesse Stewart (Associate Professor of Music, Carleton U.)

- Geneviève Cimon (formerly Senior Director, Learning and Community Engagement, NAC)

- Nicola Oddy (registered music therapist, graduate research assistant)

Many thanks to Meagan Babe who facilitated the project at Sonshine Community Inclusion Centre where 7 clients and their support staff participated. Six musicians from the NACO and three teachers from the Lotus Centre participated and provided invaluable feedback.

Our goal was to expand the Music Circle through the development of a networked musical improvisation pedagogy in collaboration with orchestra musicians, special music educators, and adults with exceptionalities, and by extension to demonstrate an innovative model for increasing equity and access to participation in music for everyone (Culp & Clauhs, 2020; Higgins, 2012).

This report is organised in four sections. Section 1 provides a brief overview of the Music Circle Program, the people it serves, and the methods it uses. Section 2 makes the case for including improvisation in MC programming and discusses the pros and cons of networked musicking. Section 3 provides detailed descriptions of improvisation activities with people with exceptionalities that work well over Zoom. Section 4 provides recommendations. Here we summarise lessons learned, including both the potential and the limitations of improvisation and networked musicking, and make recommendations for implementing these strategies in future Music Circle programs.

SECTION 1 **The Music Circle Program**

The Music Circle program was first developed in 2012 as a response to a community need for accessible orchestral performance opportunities for people with exceptionalities. The primary goal of the program was to create interactive and multimodal workshops and concerts where participants could touch, hear, and play orchestral instruments. The program is delivered in series, each featuring an instrumental family (brass, percussion, strings, or woodwinds). The same group of 8-12 participants attends the full series, which includes three workshops followed by a chamber concert. Ideally, sessions would occur weekly with each session lasting approximately 45 minutes. This combination of hands-on workshops followed by a culminating performance was intentionally designed to allow participants to become comfortable and familiar with the instruments and the musicians, as new activities can be daunting for people with certain exceptionalities. This design also allows for deeper exploration and skill development and creates the conditions for meaningful connections to be made in the concert experience. Workshops are typically provided at a location

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[3] This project was approved by Carleton University's Research Ethics Board, clearance #115555.

that is comfortable for the participants (such as a classroom or therapy centre), and the concert is held at the National Art Centre when possible.

The Music Circle program is highly adaptable to groups of participants with different ages and needs. Program delivery is rooted in principles of universal design for learning, which allows for multiple means of representation, expression, and engagement (Meyer et al. 2014). In practice, this means that within each event the material is presented in a variety of ways and participants can interact with that material in the way that is most comfortable for them. While groups are generally homogeneous in terms of age, there can still be a wide range of needs within each group. Taking an approach centred in universal design for learning allows all participants to be met at their individual level of need and in the way that appeals to their interests. The Music Circle program has been adapted for presentation to participant groups from age 5 years to adult, and with a range of abilities from high to low support needs.

SECTION 2 **Creative Improvisation and Networked Music**

Why creative improvisation?

Improvisation is a flexible and highly adaptable way of making music. Of course, there are many genres of improvisation and some kinds, such as bebop jazz or Hindustani raga, depend on mastering specific techniques within a defined style. *Creative improvisation* is a genre of improvisation that encompasses all available sounds (e.g. from melody and harmony to extended techniques and noise). It can be structured through stated rules of engagement to enable coherent ensemble playing. Such structures include conducted hand gestures (such as those invented by Butch Morris (2017) and Walter Thompson (2006)), graphic or text scores, or simply agreed upon parameters (e.g., the number of people playing at a time or exploring a limited set of musical materials). Stemming from the "free improvisation" and "free jazz" movements that evolved in Europe and North America in the 1960s, contemporary creative improvisation is not tied to a specific style. Instead, the focus is on active listening and empathetic response. Musicians draw on their full tool kit of technical and expressive resources to create abstract soundscapes, develop formal structures in real time, or play with groove.

Creative improvisation tends to be collaborative and relatively non-hierarchical. Aside from any agreed upon rules in a given piece, players listen respectfully and respond as they desire. When players jam together over time, their collective vocabulary for ensemble improvisation deepens, but creative improvisation is also a playful way for musicians to meet for the first time. In the playground of creative improvisation, classical, jazz, and Hindustani musicians can meet for the first time at the sound check and perform beautiful music together. Creative improvisation has often been linked to social justice movements, as in the Chicago-based Association for the Advancement of Creative Musicians which for over 50 years has advanced both "great Black music" and civil rights (Lewis, 2008). Fischlin et al. (2013) have documented creative improvisation's capacity to foster hope and build equitable relationships through co-creative collaboration because of its emphasis on listening, responsiveness, and reciprocity. Further, in discussing the use of improvisation by

musicians with exceptionalities, Tucker et al. point out that "to improvise across abilities is to stretch sound, communities, and consciousness" (2016, 198).

Improvisation is often not part of the formal training of classical musicians, but it has deep roots in Western art music (for example in Baroque performance practice and French organ playing). In a report for the College Music Society, Campbell et al. (2016) point out the benefits of including improvisation in music education because it opens possibilities for making music across different traditions in an increasingly diverse world. But making music without a traditionally notated score can be intimidating for classically trained musicians. One of our concerns was to develop clear and approachable techniques for improvisation tailored to the different needs of the participating musicians.

Why Networked Music?

Networked music is a strategy for making music together on-line in real time from separate physical locations. Prior to the pandemic, most experiments in networked music focused on extremely fast internet speeds and applications that require significant technical support.[4] Beginning in March 2020, the widespread demand for networked communication caused a rapid response from developers resulting in more accessible and user-friendly apps. Many apps were designed to facilitate meetings, and the voice over internet protocol (VoIP) they employ is oriented towards speech. This is a problem for music because the VoIP tends to favour the loudest sound and cancel out those in the background. Apps designed for network music, like JackTrip and Jamulus, have a steep learning curve and require some technical know-how. For EMC, we used the popular app Zoom, which, by September 2020 had added settings optimised for music, and which was relatively familiar and easy to use for all the participants in our study.

Zoom allowed us to conduct the EMC project despite provincial mandates for physical isolation. In fact, it allowed Sonshine clients with very involved diagnoses and frail health to participate. Our workshops often included up to 15 people in separate locations, using variable quality internet over wi-fi or ethernet. At Sonshine Centre, small groups were in separate rooms online at the same time. (We discuss some of the challenges Zoom posed in Section 4.) Despite these challenges, however, our creative improvisation approach garnered positive responses from participants.

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[4] Such experiments generally involved large institutions on Canarie or Internet II networks using programs such as JackTrip (developed at Stanford University's Centre for Computer Research in Music and Acoustics). NowNet Arts is a pioneer of sophisticated networked musicking. An important exception was Pauline Oliveros's Deep Listening Convergence which connected 45 musicians from different countries over Skype. Musicians worked together in pairs for 5 months and then met in the Hudson Valley, New York from June 9 - 11, 2007 to improvise in larger ensembles in shared physical space.

Research Methodology

We used an iterative and qualitative methodology that included a preliminary assessment of participants' experience and musical tastes (via email); making music together; feedback conversations after the music sessions with participating musicians, educators, and, to a more limited extent, caregivers; individual exit interviews with musicians and educators; and guided exit interviews by a registered music therapist with participating adults with exceptionalities and their caregivers.[5] Using a Grounded Theory approach (Boeije 2010), three researchers (Erin, Ellen, and Nicola) independently read all of the interview transcripts and reviewed the videos of recorded Zoom sessions for the first round of open coding, and then collated their individual results to arrive at a set of common themes for analysis (axial coding). The data were then divided up among the researchers for a second round of coding in which we applied the themes to arrive at our conclusions (selective coding). A co-authored academic article will fully report on this analysis. Here, we focus on two themes: reflections on improvisation, and applications and adaptations for people with exceptionalities. Our findings also inform the recommendations in Section 4.

Reflections on Improvisation

With a few exceptions, most NACO and LC participants had limited or no previous experience with free improvisation prior to the EMC project. Some participants had encountered semi-structured improvisation in contemporary compositions or had previous experience with improvisation in the context of a jazz ensemble or pop band. Almost everyone expressed how they became more comfortable with improvisation as a result of the workshops. As one participant shared "I think in general the whole word "improv" has changed for me. I feel much more confident to be more playful." Many noted that improvisation worked best when it was presented within a structure; for example, call and response, a rhythmic groove, a game, or a story. Such skeleton structures helped to ground and guide musical choices, encouraging exploration and risk taking.

Three main themes appeared in response to our interview questions about improvisation: a) community building, b) creativity and expression, and c) empathetic listening. In what follows, content in quotation marks refers to direct quotes from our interviews with participating NACO and LC musicians.

Community building

Although there were many challenges improvising over Zoom, one of the most common terms used to describe the sessions was "fun". Because the focus is on participation and exploration rather than

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[5] Most Sonshine participants were non-verbal. Oddy, a registered music therapist, met with each adult musician at Sonshine along with a knowledgeable caregiver. The interviews consisted of reprising selected activities, gauging individual responses, and consulting the caregiver. This data is highly interpretive and therefore less conclusive - more an indicator of level of satisfaction with activities. Our analysis therefore draws largely on feedback from NACO musicians and Lotus Centre teachers.

skills acquisition, improvisation is a means to bridge differences between groups and "see how we can connect through music". As one participant shared:

> One of the valuable takeaways for me was that all of us [in the integrated sessions] are a band. It doesn't matter if you have a kazoo or French horn. You're a full member of the band. Not an intern or a student. We're all exploring music and sound together. Each person had unique and valuable things to contribute to that experience regardless of physical or other abilities.

As one musician pointed out, community music is part of the NACO's mandate, practised through frequent school visits and other community outreach initiatives. Improvisation was helpful in putting the emphasis on participation: "It's not so much about what right notes you hit but you know, did you bring the spirit of it… It's the connection thing that I love."

Creativity and expression

Several experienced Music Circle facilitators realised that they had already been using quite a few improvisational strategies with participants in that program, especially when interacting with individuals and allowing them to handle their instruments. They noted that adaptability is correlative to improvisation. Many participants also indicated that they find improvisation to be a useful teaching tool and plan to incorporate it in their pedagogy, both to expose students to improvisation and to encourage sonic exploration. Free improvisation removed the constraints of specific harmonies and scale patterns: "You can express yourself in quite unconventional ways." Several mentioned that structures such as call and response "can help to open up creativity in the participant." For Lotus Centre teachers, improvisation offers an opportunity to expand beyond the typical structured activities they use in their teaching of students with exceptionalities because it invites students to be "creative and try different sounds." As one teacher noted:

> One thing I tried since doing this project: in the middle of the process [of playing specific chord progressions and note patterns], I say "Now let's break it open and see what happens. Can you use different registers? Can you put the pedal down and see what happens? Can you trust yourselves to make some sounds and be OK with that?" I wouldn't have thought to do that before.

Most see potential for improvisation with people with exceptionalities. As one NACO musician shared:

> To have the freedom to play whatever, and make things up on the spot, the spark it gives you, and to be interacting with people is very special. It's a good idea to appropriate all these kinds of interactions with people with exceptionalities or children or adults or elderly. However you can make it work. That's a great thing. Get off the page.

Empathetic listening

Although listening was sometimes difficult over Zoom, most participants pointed to the importance of actively "listening and responding" and "going with the moment." One NACO musician shared: "For me it's been about … the transmission of energy. The sharing of spirit, idea, or stories. A lot of it was learning about showing intention through sound." Careful listening helped participants to develop their improvisational skills, as one participant shared "I took lots of quotes from the sessions. The way [the facilitators] spoke about listening. The way that responding is not the same as

listening and the way you want to expand on an idea and not necessarily imitate." Another placed the emphasis on empathy: "it's not about me improvising the best I can, it's about me opening my eyes and ears and heart to the folks that we're performing with - those with exceptionalities."

Applications and Adaptations for People with Exceptionalities

Need for structure

Most people are soothed by structure. Predictability and boundaries help us to feel grounded and understand our place in time and space. When working with people with exceptionalities, it is vitally important that we develop a predictable and consistent structure of activities for the sessions for two reasons: 1) it is part of many exceptionalities to have difficulty making sense of the world, which can be overwhelming to the nervous system, and 2) people with certain exceptionalities (particularly autism) prefer highly structured and repetitive routines, and can become upset when the unexpected occurs. While it is important to have flexibility in any teaching or music making to allow us to follow any interesting threads that may appear, we should do so within an overarching structure.

Structure may seem antithetical to a music making experience based on improvisation, but in fact, structure in the program itself becomes more important when the music making may be less structured.[6] In the EMC, this can be done by having a consistent order of activities, bookended by a hello and goodbye song (or opening and closing activities if a hello and goodbye song is not appropriate for the participants). While the music itself will change due to the nature of improvisation, the type of activity remains the same. For example, the order of activities could consistently be as follows:[7]

- Hello Song or Opening Activity

- Play/Sing Along Song

- Storytelling with Music

- Musical Freeze Game

- Goodbye Song or Closing Activity

Another way to incorporate structure is within the music making itself. Creative improvisation can be incorporated into structured activities; for example, improvising during the chorus of a familiar song, or within the framework of a story. This serves the dual purpose of reinforcing the structural elements of the music implicitly as the participants experience it through their music making.

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[6] Improvisation and composition are not really two distinct forms; rather, they should be considered on a continuum. There are many examples of structured improvisation using, for example, graphic scores, text instructions, or suggested musical materials.

[7] See Section 3 for full descriptions of these activities

Incorporating structure in this way can make the improvisatory experience less overwhelming for the participants.

Support for Sensory Needs

Everyone has a unique response to the sensory environment. While some may crave high impact sensory experiences, like thrill rides or loud music, others may prefer low impact sensory experiences, like hiking or reading. We also have different experiences of different sensory inputs, so we may, for example, like strong visual input but be averse to strong smells. For many people with exceptionalities, the experience of the sensory world is heightened. There can be a much greater need for the sensory input to match their own sensory needs since they may have a reduced capacity for internal sensory regulation, meaning that their nervous system may be less able to cope with too much or too little stimulation.

There is a misconception that autistic people are hypersensitive to all stimuli and that providing a sensory-friendly environment means keeping the stimulation low. However, the truth is that autistic people, as well as those with other exceptionalities, can also be hyposensitive and require lots of sensory stimulation. This can make creating a truly sensory-friendly environment very challenging. It is important to provide a variety of options for sensory participation that include both low impact and high impact elements. For example, a student who is seeking sensory stimulation may choose to use a percussion instrument, while a sensory-averse student may prefer to use an electronic instrument like the AUMI (described below). We can also provide options for more or less movement and provide tools that create sensory input like a weighted vest, and those that reduce sensory input like noise-cancelling headphones. Awareness of the sensory environment and providing many options to add or reduce stimulation is important in creating a comfortable and accessible music making environment.

Finding the Right Pace

Determining the pace for a group with diverse needs can be challenging. On one hand, it is important to provide the time and space needed to ensure full processing and allow for engagement. On the other hand, if the pace is too slow some participants may become disengaged. We also want to allow for individual participation, but at the same time maintain engagement of the group. Here are a few simple tips to allow for both space for processing, and continued engagement:

- When working individually or in small groups, limit a given activity to less than one minute to reduce disengagement for others.

- Use short duration call and response activities that allow for individual responses but move fairly quickly.

- Encourage participants to listen actively or provide alternate ways to participate when students are performing.

SECTION 3 - SUGGESTED ACTIVITIES

Activities in the EMC Project

In this section we provide further details about the activities that we incorporated into the EMC project, focusing on the workshops with Sonshine Centre clients and the integrated ensemble with NACO and LC musicians. By maintaining a consistent structure and order, we were able to provide repetition and stability which, in turn, allowed us to introduce new elements each session. Due to COVID, participants at Sonshine were not allowed to sing, so our emphasis was on playing along with various instruments including rattles, drums, tambourines, touch boards, guitar, and small wooden frogs. Erin, Jesse, and Ellen each led activities. Here, we provide direct examples from our research, to show how predictable structure and improvisation can be combined for participants with quite involved needs. These activities can easily be adapted for different groups and contexts. The length and complexity of activities can be adjusted as well. We kept each activity very short (1 to 5 minutes).

Three elements came up repeatedly in participants' feedback: 1) the importance of addressing participants directly by name wherever possible; 2) the importance of including the caregivers in the activity; 3) it is helpful to consult participants in advance so that activities can be tailored to their tastes and needs. We address these issues in more detail in Section 4.

Hello and Goodbye Songs

Hello and goodbye songs frame the sessions and are always the same. They can be sung *a capella* or accompanied by a simple drum beat or another instrument. It is important to use the same approach each time to maintain consistency and build familiarity. Before beginning the song, provide clear instructions. If working with other facilitators, you can call on them to demonstrate how the song works. In both songs, each person is called by name and invited to respond. If the group is larger, then 2 or 3 people can be invited to respond together. The facilitator should provide affirmations to the responses, such as "good job" and "I liked that!" Help people prepare to respond by saying who is next. Here's an example of each song as lead by Erin with Sonshine clients (names of participants are pseudonyms). Melodies are simple, repetitive, and use mainly stepwise motion within a relatively small range.

Hello Song

> "Hi everybody! I'm really happy to see you today. We're going to sing our hello song. We'll always do this song the same way, every time. But you can do different things to say hello. Anything you want. You need to listen when I say your name. You can wave, or say hello, or tap your knee, or shake a rattle - anything you like."
>
> *Hello everyone, how are you today?*
> *Answer when I call your name*

"Alright, Billie first"

Billie are you here?

    Billie responds by shaking a rattle

"Great job! OK, Janet, now it's your turn"

Janet are you here?

    Janet responds by strumming a guitar placed on her lap

"Great!"

Welcome to music class today.

    Repeat the song, inviting others to respond either individually or in groups of two or three.

<u>Goodbye Song</u>

"It's time to sing our goodbye song. So, remember, in our goodbye song, you also get a chance to do a little solo like we did in our hello song. I'm going to say your name and then you're going to say goodbye however you want. You can wave, you can make some noise with your instrument, whatever you want to do. Listen carefully when I say your name."

Goodbye, see you next time everyone

Goodbye, see you next time everyone

Goodbye Billie

    Billie waves

"Good job Billie. Next is Carissa."

Goodbye Carissa

    Carissa shakes a rattle, assisted by her helper with hand over hand. Her helper sings "goodbye"

"Beautiful, Carissa!"

Goodbye, see you next time everyone.

    Repeat the song, inviting others to respond either individually or in groups of two or three.

Play/Sing Along Song

In advance of the EMC project, we asked Meagan Babe, facilitator at Sonshine Centre to tell us a bit about the participants' musical tastes. Learning that many participants enjoy Disney musicals led us to using karaoke versions of Disney songs to engage participants in listening and joining in. Simple

songs with a fair amount of repetition worked well; for example, You've Got a Friend in Me (from Toy Story) and Hakuna Matata (from Lion King).

Here is an example of how Ellen led the cover song. She began by modelling listening and responding through improvisation.

> "It's time to do our play-along song with improvisation. That's the kind of music making where we listen, and then we respond any way we want. We respond with any kind of music that feels good to play. Got your instruments ready?"
>
> > Ellen demonstrates her tambourine. She invites everyone to make a noise and play their instruments, leaving time for everyone to respond.
>
> "Great! Now, when I put my instrument on my lap, it's listening time. And when I'm singing, that's when we listen. But when I lift my instrument up and say - 'OK everybody play!' - then that's when we all play."
>
> > Ellen demonstrates by placing her tambourine in her lap and singing "Now I'm singing and you are listening". Then she lifts her tambourine and invites everyone to play their instruments with her.
>
> "Great! Now let's try it with our song, Hakuna Matata. Let's start by listening."
>
> > Using a karaoke version of Hakuna Matata, Ellen sings the verse (with her tambourine on her lap). At the chorus she lifts and shakes her tambourine and invites everyone to   join in. While people are playing she sings a few improvised riffs, like "Everybody play your instruments, play along with me." As the music approaches the verse again, she says:
>
> "Ok, time to put our instruments down again and listen."
>
> > She cues everyone to play together at the end.
>
> "Wow - really, really good playing! I love that we heard so many sounds. We had jingles, and rattles, and guitar - excellent job!"
>
> > Ellen follows up this activity by introducing a call and response improvisation. This time there is no recorded song.
>
> "Another kind of thing we can do when we're improvising is play solos in response to someone. I brought my flute." [demonstrates flute] "So, I'm going to play my flute and then I'm going to invite Carissa to play a solo."
>
> > She plays a short melody on her flute and then sings "Carissa can you play for us today?" Carissa plays tambourine with the help of her caregiver.
>
> "Carissa, that was awesome - and I love your beautiful smile! The next person I'm going to call on is Phil. Here's a little bit of flute music just for you."
>
> > She improvises a different melody and then sings "Phil can you play for us today?" Phil plays tentatively at first and stops. Ellen praises his playing and encourages him to play a bit more.

It is important to gauge the attention of the group when pacing this activity. Musical solos by the facilitators should be very short (e.g. a simple phrase) so that the emphasis is on the response from

the participant. It is also important to leave ample time for response since some will need a bit more time to process. This activity could also be done with a solo "call" and a group "response".

Both activities offer opportunities to model listening and playing. They tacitly illustrate formal elements like verse and chorus, call and response. And they can be nuanced according to the abilities of the group. For example, elements of repetition, contrast, tempo, and dynamics could also be introduced. The "call" could be loud, provoking a loud response. This could be followed by a very quiet call and a quiet response, etc. It's clearly also possible to do the song activity without a karaoke track. For instance, musicians in the MC program could play a live arrangement of the song and a leader could give the cues for participants to join in.

Storytelling with Music

Telling a brief story creates an opportunity to engage participants directly as characters, as musicians, and in the soundscape. We created simple stories that could relate to participants' life experiences: a picnic in the park, a day at the beach. We named participants directly and included everyone present (including caregivers) in the story. Ellen prepared by writing the story in advance and deciding who to call on for each activity to ensure a good flow. The story activity was also well suited to the touch board instruments. For example, crinkly cellophane became the sound of unwrapping sandwiches, and the scratch of sandpaper became the feeling of digging one's toes into sand at the beach. There is also much scope for experimenting with instrumental sounds. NACO musicians were highly inventive both in playing 'mood' music and in creating animal and other nature sounds on their instruments.

Some things to keep in mind: The storyteller should communicate directly with participants, asking people to play by name and signalling the cues clearly and directly. It is also important to include diverse sensory information in the story. The storyteller should be prepared to improvise in response to the participants' reactions, taking advantage of any humorous moments that emerge and shortening or lengthening details to match the interest level of the group. Here is an example of a story Ellen told:

"One day [*naming the participants*] decided to go on a picnic to the park. They packed their backpacks with hats and sunscreen and snacks."

Ellen asks a couple of participants what their favourite snacks are, further personalising the story.

"When everyone was ready, they set out, walking and rolling along the street to the park."

Ellen asks some participants to play lively walking and rolling music. Rolling acknowledges that some participants use wheelchairs and normalises this.

"When the friends arrived at the park, they heard frogs croaking and ducks quacking and splashing in a pond. They decided to have their picnic under a big maple tree nearby. It was good to feel the cool breeze off the lake and sit in the shade after being in the hot sun."

Three participants are asked to make frog and duck sounds. Others are invited to use their voices to make breeze sounds.

"As the friends were enjoying their picnic, they heard brass band music in the distance. Hurray! Their friends the musicians [*name the musicians*] had arrived."

Brass players are invited to improvise some festive band music, starting quietly as if at a distance and getting louder as they join the picnickers.

"Everyone was enjoying the music so much that they didn't notice a sneaky little squirrel scamper up and steal a cookie from Billie who cried 'Hey! Get out of here you rascally squirrel!' Everyone laughed!"

Flute and violin are invited to play sneaky and scurrying squirrel music.

"The friends all had a lovely day, but as the sun sank in the sky it was time to head home. Everyone agreed that it had been the best picnic ever. Now they were tired and ready to go home and rest."

Everyone is invited to play some quiet and peaceful walking and rolling home music.

"Thanks everyone for your wonderful music today!"

As the example above shows, there are many opportunities in this activity to practise musical ideas, from moods to textures to dynamics. Musicians in the integrated ensemble were inspired by this activity and offered several suggestions for further nuances. For example, if NACO musicians were to use such a story in the Music Circle program, they could become familiar with it and know their cues in advance. This would enable them to create a more seamless narrative and the storyteller would only have to signal cues directly to the MC participants. It is important to leave plenty of space in the story for group music making. If a satisfying improvisation is developing and people seem to be enjoying it, then the storyteller should allow it to conclude before moving on. If people seem restless it's time to pick up the pace or leave out some details. Improvising in the moment with pacing, flow, and the energy in the room is an essential skill for facilitators.

Musical Freeze Game

This activity, led by Jesse in the EMC, was universally popular. Jesse is a versatile percussionist who is able to play a lively tune on the handpan (a small, tuned, metal percussion instrument reminiscent of steelpans from Trinidad and Tobago) while triggering a drum beat via an electronic device called the phonotonic attached to his hand. When he is playing the handpan, the beat is present, and when his hand stops moving, so does the beat. As with all activities, Jesse explained and demonstrated before beginning:

"I have my handpan here [*plays*] and I also have this thing on my hand [*demonstrates drum beat*]. So, when I move my hand, you can hear the drum beat. And when my hand stops, it stops. We're going to do our musical freeze game. And I will call out the musicians who are going to play along with me. At the end we'll all play together. And when I say "freeze!" you have to stop playing. Let's give it a go! Here we go!"

Jesse sets up a beat and calls on some players.

"How about Jim and Leslie? We're in F Major".

> A trio between Jesse, Jim, and Leslie gets cooking. After about 20 seconds Jesse calls "freeze!" and lifts both of his hands in the air to demonstrate freezing. He gives an affirmation

> "That was really good freezing!" "We're going to continue on with [*names 4 musicians*]".

> With this larger group he lets the jam go on a bit longer before calling freeze. Once again, Jesse provides affirmations. After everyone has had a chance to take part in the game (about 4 rounds), everyone plays together in one final joyous round.

One of the reasons the musical freeze game is successful is that it is groove based, providing a fun and energetic support and through line for other people to play along with. It is, of course, adaptable for all kinds of instruments and one could easily add movement to the activity. Although latency (time lag) on Zoom can be considerable, individuals are often able to lock into a single person who provides that steady beat. The overall texture may be full of latency, but it nevertheless feels like a groove to individual participants.

These examples of musical activities are well suited to participation by both professional musicians, educators, and people with exceptionalities and their caregivers. Playing together creates a special feeling of connection and models the principle that music is for everyone. Many other activities could be created with the following principles. They should be adaptable, encourage participation, be easy to demonstrate with just a few instructions/modelling, embed musical ideas in their conception, and provide enough structure for comfort and enough space for creativity, the unexpected, and laughter.

Incorporating Adaptive Instruments in the Music Circle

Most musical instruments require the player to shape their body to the structure and mechanical apparatus of the instrument. Adaptive instruments operate on the opposite principle: the instrument should conform to the needs of the player. We used two adaptive instruments in the EMC project.

AUMI

AUMI (Adaptive Use Musical Instrument)[8] is a free software application that turns any camera-equipped computer or iOS device into a set of musical instruments in which movement triggers musical sounds and samples. For the EMC Project, we used AUMI-equipped iPads. Sensitivity can be adjusted so that AUMI can pick up extremely small and limited movements or be calibrated to respond to large gestures. We supplied three iPads on stands to the Sonshine Centre, pre-set with a selection of musical samples that we felt would work well in group improvisation. AUMI is easy to use and free, which makes it accessible.

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[8] For information on AUMI see www.aumiapp.com

Touch Boards

Touch boards are a common sensory device used by people with exceptionalities to explore different textures.[9] We created sonic touch boards by attaching 'noisy' items to a prefab canvas painting frame, including sandpaper, crumpled tissue paper, cellophane, bells, and the metal 'pop' tops used in canning. These light and inexpensive instruments were suitable for placing on a lap or wheelchair tray and were very popular with the Sonshine clients. One advantage is that they allowed blind participants to make sonic choices. We used particular sounds in the context of the story activity such as rustling paper tissue for wind sounds and brushing a sand block against the sandpaper to accompany walking on the beach.

As with all activities it is important to provide choices and to be sensitive to the participants' reactions and any sensory issues.

Incorporating Improvisation in the Music Circle

The traditional MC program has always included elements of improvisation. The individual instrument exploration that is a cornerstone of the MC workshops is highly improvisatory in nature as it was imperative to allow each participant to interact with different instruments in a way that was natural and accessible for them. However, one of the key purposes of this project was to explore ways in which improvisation could be incorporated more fully into the MC program structure, both in the workshops and the culminating concert. Here are a few ideas of ways in which some of the improvisatory tools used here could be applied in the MC workshops:

- After the musical instruments have been introduced, use storytelling to allow further engagement. The facilitating artist(s) could bring instruments from one participant to the next at key parts in the story, while other participants use percussion instruments, body percussion, movement, or vocalisation.

- During individual instrument exploration, create small groups (duos or trios) by encouraging one or more participant(s) to join in with adaptive instruments or other sound making.

- The facilitating artist plays a solo on one of the featured orchestral instruments, with interludes allowing improvisatory participation from the participants.

- Incorporate the freeze dance idea by inviting participants to move while the facilitating artist plays and freeze when they stop. One variation would be to allow one of the participants to lead!

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[9] Our touch boards were created by Brett Fortin, of the Lotus Centre.

Here are a few suggestions for incorporating improvisation in the concerts:

- Include the storytelling from the workshops in the final concert, but this time include all performing musicians.

- Invite movement and use of body percussion or vocalisation in certain sections (e.g., during the chorus) along with a familiar tune performed by the musicians. Using a piece with a well-known structure will make it easier for participants to know when it is their turn to take part.

- Invite one or more students to play along with the performing ensemble as a soloist or in small groups at specific points in a piece.

Note that there are some similar elements between the suggestions for the workshops and the concert. This familiarity is important in creating a comfortable experience for many people with exceptionalities, and it will allow them to experience the same activities with the richness of more orchestral instruments.

Improvising with Specific Instrument Groups

As the MC program is structured around the presentation of specific orchestral instrument groups, the activities and application of these ideas will vary as the instruments have such different properties. Some instrument groups may not lend themselves as well to ensemble playing as there may only be one or two of the instruments on hand (this is particularly true of strings) and in these cases you may want to incorporate more percussion or other sound making. However, it is best to find creative ways to explore the principles and mechanics of the featured instrument group whenever possible. Here are a few creative ideas:

Woodwinds: Making a sound on woodwind instruments can be challenging for many participants, particularly those with oral motor difficulties. It may be easier for them to make a sound on a kazoo or a slide whistle, and they can continue to explore the featured instrument by touch and by listening. Participants can also experiment with blowing, using bubbles or blowing on fans that spin (a fun sensory experience!).

Brass: Typically, during the MC workshops and concerts, there are a number of mouthpieces available for participants to use as a precursor to playing the instrument, or to use when another participant is using the instrument. Participants can also make buzzing sounds with their lips.

Strings: If they are available, ukuleles are a good option to incorporate. This will allow participants to strum along while one participant or the facilitating artist is playing the featured orchestral instrument. Another option would be to use string sounds through an adaptive instrument like the AUMI.

Percussion: The possibilities for percussion are almost endless! Percussion instruments that make animal sounds (wooden frogs or hand-manipulated bird calls, for example) can be used to create nature-inspired soundscapes. Percussion instruments also provide many options for participants with varying levels of physical ability, as there are many ways to grasp or strike to create a sound, and striking implements (sticks, mallets, etc.) can be adapted to suit the abilities of participants who have difficulty grasping or holding small items. Found objects are another important resource: cardboard boxes can be used as makeshift drums; steel mixing bowls produce bell-like tones when struck, zippers on jackets make a sound reminiscent of record scratching; rubbing our hands on our clothing or carpet produces a subtle sonic texture. We can also use our bodies through hand clapping, foot stomping, etc.

While the goal of each MC series is to allow participants to experience the featured instrument group as much as possible, incorporating complementary sound making through adaptive instruments, percussion, or our bodies can be a great way to maintain engagement and create interesting sounds together.

SECTION 4 - RECOMMENDATIONS

Getting to Know Each Other

Wherever possible, share information about each other in advance of the sessions (a challenge with larger groups or shorter sessions).

- Share photos and bios of NACO musicians with participants in advance. Bios should be personal (musical tastes, fun facts) rather than strictly professional.

- Ask for pertinent details about the special needs of participants in advance, but also about their musical preferences. For larger groups, ask a teacher to ask students about their favourite music and to share a group photo with a list of their comments.

- Take time to do a 'getting to know you' activity. Using first names of musicians, participants, and caregivers personalises the session and helps to create a sense of community. If working with a large group, it might still be possible to divide the group into teams and give them fun names.

Including Support Workers and Caregivers

Support workers and caregivers have a primary role in the lives of participants. Everyone we interviewed mentioned the great value of supporting them in participating in the activities. Sonshine staff stated that although their focus is on their clients, having more information about the activities would help them to support their clients and also to join in the fun as appropriate. We observed that smiling, engaged caregivers often energised and motivated participants.

- Offer a workshop for caregivers to introduce the activities and discuss how you want them to support the students. When working online, musicians sometimes found it difficult to gauge what an individual needed. Let caregivers know to signal that the participant needs more time to respond musically, rather than shaking a rattle for them just to keep things moving.

- Provide practical resources on improvising with people with special needs. See Appendix for a list of such resources.

- If using songs, provide lyric sheets.

- Make time to gather feedback from caregivers and make appropriate adjustments to activities in response.

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Effective Virtual Program Delivery

Musicians, educators, and participants almost universally agreed that being in the same room together is optimal, but they also pointed to several advantages of the online format, including accessibility for participants who can't leave home, eliminating travel time for busy musicians, and overcoming barriers such as inclement weather. Clearly, virtual program delivery would also allow the MC program to reach out to remote communities.

Here are some strategies for effective virtual program delivery, building both on our research experience and practical insights that we have all developed during the pandemic:

Audio

- Hardwired connections are most reliable.

- Use of a good microphone (e.g., Blue Yeti) can significantly enhance the sound. Provide screenshots illustrating the optimal set-up for music. (See Appendix for an example of clear instructions on Zoom in summer 2021 but note that settings are always changing as software upgrades.)

- Build time in each session to do a sound check before beginning. This is crucial!

- Practice adaptable microphone technique: for example, a trumpet or trombone might need to be directed slightly away from the microphone, but if the musician switches to vocals or a small rattle, they will need to move closer to it and might need to adjust their volume.

Visual

- Zoom feels most intimate when each participant has their own camera/square of real estate on the screen so that everyone can see facial reactions.

- If working with groups of participants in a single location be sure to set the 'frame' so that everyone can see as well as possible. This will likely need to be adjusted each time.

- Pay attention to lighting and background. Ensure that there is good contrast so that participants are clearly visible.

Communication

- Manage expectations. Even with the best technical set-up, internet variabilities mean that there will be lag and information gaps (freezing, distortion). Patience and good humour are key!

- Establish open communication so that people feel comfortable reporting difficulties and taking time to fix them.

- Develop a virtual performance practice: lean into the camera, adjust gestures to fit the frame, practice observing the whole screen - be aware of who seems engaged, who seems to need more time to process information, project warmth and enthusiasm.

Effective Music Making

Here is a summary of the musical strategies that we found to be effective in the EMC.

- Find out existing musical preferences and build on them where possible

- Building trust and empathy is part of music making - use names and incorporate participants into musical activities.

- Not every activity has to be groove based, but rhythm is often an effective means of energising people and coordinating activity.

- Balance structure and freedom. Use participatory forms like call and response, sing/play along, and musical interludes in a story.

- Be sensitive to the different response times of participants.

- Provide plenty of affirmations and encouragement.

- Use small groups (duos and trios) to foster confidence and interactive ensemble playing.

- Provide diverse tools for music making such as adaptive use instruments, touchboards, and vocals–these work great alongside instruments available in the home and classroom.
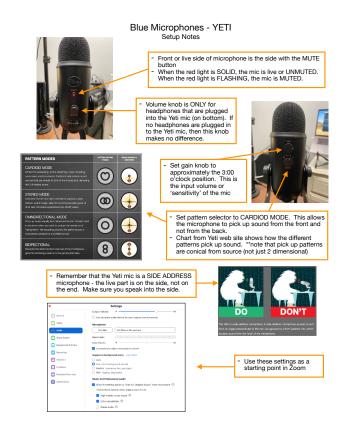
APPENDIX

Resources for Improvisation with Special Needs Participants

Playing to our Strengths: A Community Improv Tool Kit http://improvenabled.ca/

Improvisation Tool Kit http://www.improvcommunity.ca/projects/toolkit

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Sample of Zoom Settings for Music Making (2021, created by John Rosefield, Carleton University)

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Tucker, Sherrie, Pauline Oliveros, Neil Rolnick, Christine Sun Kim, Clara Tomaz, David Whalen, Leaf Miller, and Jaclyn Heyen. "Stretched Boundaries: Improvising Across Abilities." *Negotiated Moments: Improvisation, Sound, and Subjectivity,* edited by Gillian Siddall and Ellen Waterman. Duke University Press, 2016: 181-198.

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