Writing Equity Diversity and Inclusion Sections on NSERC Discovery Grants

Overview

- Discovery Grant EDI requirements overview
- Tips on considering audience, language and tone
- Examples of effective EDI statements
- Q&A periods

Webinar Rules

- This session is being recorded. Please turn your camera off if you do not wish to be on screen.
- Please remain on mute and indicate you have a question with the Raise Hand function.
- Please type questions in the Q&A, if you prefer.

Panelists

- Adrian Chan (Systems and Computer Eng)

- Banu Örmeci (Civil & Env. Eng): 1509 – Civil, Industrial and Systems Eng

- Christopher Rowley (Chemistry): 1504 – Chemistry

- Kristen Schell (Mechanical & Aerospace Eng): 1512 – Mechanical Eng

- Rowan Thomson (Physics): 1505 – Physics, Co-chair

Equity, Diversity, and Inclusion (EDI) Requirements in NSERC Discovery Grants

- **Excellence of the Researcher**
  - Applicants are asked to describe past contributions to the promotion of equity, diversity and inclusion in the research enterprise (if applicable).
- **Merit of the Proposal**
  - Applicants are expected to describe consideration of sex, gender and diversity in the research design
- **Training of highly qualified personnel (HQP)**
  - **Applicants are required to describe EDI considerations in their future approaches to recruitment, training and mentoring.**
  - Applicants are asked to describe specific actions implemented in support of EDI in their past training of HQP (if applicable).

EDI is given most consideration in "Training of HQP" rating.

New Guidelines

- NSERC has adopted new guidelines assessment of contributions to research, training and mentoring

- Contributions to EDI will be recognized more readily in Excellence of Researcher component

- Journal impact factors should not be included

- Check for updates in Review Criteria and Merit Indicators over summer

https://www.nserc-crsng.gc.ca/InterAgency-Interorganismes/EDI-EDI/Action-Plan_Plan-dAction_eng.asp
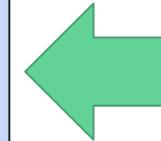
From the NSERC Discovery Grant Peer Review Manual

"If applicable, considerations of equity, diversity and inclusion in the training environment, can include, but is not limited to: discussion of **challenges or barriers** encountered in ensuring an inclusive research and training environment; a qualitative description of **specific actions** implemented to support equity and inclusion in recruitment practices, mentorship approaches, and initiatives aimed at ensuring an inclusive research and training environment and trainee growth. "
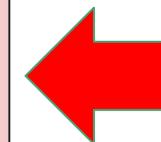
Text From Review Manual

- A qualitative description of existing challenges or barriers to the inclusion and advancement of under-represented groups in the **NSE**, which are specific to the context of the applicant's program of research:
    - An **inclusive research environment** exists where all people are respected and have access to the same opportunities, where all individuals can reach their full potential, unimpeded by inequitable practices;
    - **Barriers** to participation can be physical, procedural, visible, invisible, unintentional or other;
    - **Context** specific to the applicant's program of research can relate to the field of research (e.g. extended periods of travel, field work requirement or others) or aspects related to the institution (e.g. geographic region in Canada, urban centre or remote location, department size, type of degrees granted or others); The planned approach to promoting the participation of a diverse group of HQP, taking into account equity and inclusion in recruitment practices, mentorship approaches and initiatives aimed at ensuring an inclusive research and training environment and trainee growth.

HQP EDI Merit Indicator Grid Criteria

Outstanding	• Challenges related to equity, diversity and inclusion specific to the institution **and** field of research are **clearly described**. • Specific actions to support the recruitment of a diverse group of HQP **and** an inclusive research training environment are **clearly defined.**
Very Strong	• Challenges related to equity, diversity and inclusion specific to the institution **and** field of research are **described**. • Specific actions to support the recruitment of a diverse group of HQP **and** an inclusive research training environment are **defined**
Strong	• Challenges related to equity, diversity and inclusion specific to the institution **and/or** field of research are **described**. • Specific actions to support the recruitment of a diverse group of HQP **and/or** an inclusive research training environment are **defined**.
Moderate	• Challenges related to equity, diversity and inclusion specific to the institution **and/or** field of research are **partially described**. • Specific actions to support the recruitment of a diverse group of HQP and/or an inclusive research training environment are **partially defined**.
Insufficient	• Challenges related to equity, diversity and inclusion specific to the institution **and/or** field of research are **inaccurate or not described.** • Specific actions to support the recruitment of a diverse group of HQP and/or an inclusive research training environment are **not appropriate or not defined**

← **Satisfy all these points explicitly and convincingly**

← **An absence of EDI considerations will result in an "I" score (unfunded)**

Before You Write, Consider Your Audience

- **NSERC recruits researchers to serve as panel members in an "evaluation group."**
  - Membership balanced by region, size of institution, gender.
  - 90% are Canadian professors holding discovery grants.
  - Members review ~40–50 applications every December–February.
  - Meet in real-time for 3–4 days in February to rate applications.

- **Each application is discussed for exactly 15 minutes.**
  - Entire application – including EDI sections – are reviewed by the same panel members.
  - EDI section discussed for each proposal, but only for 30–60 seconds.

- **Every component of proposal must be clear and direct.**
  - Aim for "easy reading."
  - Members may not be deeply familiar with EDI terminology and theory; use NSERC's terms
    - https://www.nserc-crsng.gc.ca/InterAgency-Interorganismes/EDI-EDI/index_eng.asp
  - Clear, definite statements that can be communicated easily

Topics Everyone Can Address

Groups of people

- Women
- Black and racialized
- Indigenous
- LGBTQIA+
- Mental health or physical disabilities
- Parents
- Economically disenfranchised

Challenges

- Recruiting
- Retaining
- Accommodations
- Work conditions
- Mental health / work life balance
- Harassment

Actions

- Change procedures to remove barriers or state existing effective procedures
  - institutional leave policies, limit work hours, weekends, field work, travel, sufficient pay...
- Actively recruit, retain, and support
- Provide opportunities (e.g., mentorship), support career after graduation

Make Sure Your Terminology is Current

- Some terms used in research have been reassessed; make sure your terminology is current
- Men/women vs male/female

  - Sex refers to biological attributes. Primarily associated with physical and physiological features

  - Gender refers to the socially constructed roles, behaviours, expressions and identities of girls, women, boys, men, and gender diverse people.

Old Terminology

We will use a distributed computing approach with a **master/slave** architecture.

New Terminology

We will use a distributed computing approach with a **primary/secondary** architecture.

To retain more **female graduate students** in our group, we have implemented anti-harassment policies.

To retain more **graduate students who are women** in our group, we have implemented anti-harassment policies.

Structure

- EDI plans should explicitly describe recruiting and challenges in institution AND field
- Identify groups affected
- Propose specific actions to address each of them
  - One succinct paragraph each

Very Strong	- Challenges related to equity, diversity and inclusion specific to the **institution** and **field** of research are described. - Specific actions to support the **recruitment** of a diverse group of HQP and an inclusive research training environment are defined

Recruitment

Group	Women/indigenous/racialized groups
Challenge/Barrier	Lack of engagement / role models
Action	Outreach events

Institution

Group	Physically disabled
Challenge/Barrier	Inaccessible workspace
Action	Renovated workspace

Field

Group	Women
Challenge/Barrier	Exposure to teratogens
Action	New equipment and protocols to eliminate exposure

Effective EDI statements need **context** and **action**.

Context – Clearly described   **Barrier and its effect identified**   *Specific Actions – Clearly defined*

The low levels of inclusion of women the foremost EDI challenge in the field of theoretical chemistry. My experience is that students will only consider graduate studies in a field if they are engaged and encouraged in the subject early in their undergraduate program, and the lack of engagement of theoretical chemists with this group has been a barrier to inclusion. *To address this, I will hold annual laboratory tours for our local chapter of Women and Science and Engineering and encourage interested students to hold NSERC USRAs in our group.*

Actions Should Be Structural

- Proposed actions should describe a formal policy, procedure, or practice.
- It should not be dependent on your intent or state of mind.

Issue identified, but action is vague, subjective, not structural

Issue identified, lots of specific actions designed to limit effect of bias

Bias in recruiting graduate applicants is a serious EDI issue in our field. I am aware of this when reviewing student applications and will attempt to avoid allowing unconscious bias to affect my decision making when I am selecting graduate students.

Bias in recruiting graduate applicants is a serious EDI issue in our field. Our department has comprehensive anti-discrimination policies in place for the graduate admissions process. I also follow non-discrimination practices when recruiting graduate students to my group. I make a written list of the skills needed for a project and include all applicants from underrepresented groups who meet these requirements in my interview shortlist. I interview all applicants with the same set of questions, which have been reviewed by our university equity officer to avoid bias.
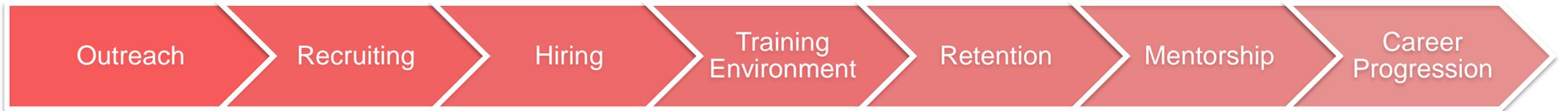
Questions?

Examples

The following are based on EDI statements in DG's

Your statement should be specific to your context, consistent with the rest of your proposal

Every EG member will interpret the EDI requirements in a different way and will react to your proposal differently

Topics to Address

Outreach	Recruiting	Hiring	Training Environment	Retention	Mentorship	Career Progression

Action to Recruit Underrepresented Students

There have been an insufficient number of qualified applicants from underrepresented groups at my institution to achieve an appropriate level of diversity in my research group (i.e., women, indigenous, and racialized). Having researchers to serve as role-models is crucial for these students to see themselves in careers as research biologists, so I organize annual information sessions for undergraduate students, where a diverse set of faculty members present their research and provide information about opportunities to work as undergraduate researchers. We send invitations directly to all students enrolled in B.Sc. programs, as well as campus organizations serving underrepresented groups. This has been effective in increasing the number of applicants from these groups as USRAs and I am optimistic this will lead to increase in the number of graduate applicants.

Identifies challenge?	Yes, specific
Plan to address challenge?	Yes, specific
Tone	Concerned, positive, engaged, taking action

Addressing Challenges in the Work Environment

Much of the equipment used in our field research was designed for men and are not ergonomic or comfortable for the women in our group. This creates a barrier to the recruiting and retention of women in the field of marine biology. Our first step in addressing this will be to purchase survival suit liners that are designed for women from a new vendor (Mustang Survival). Going forward, we will only purchase equipment that is equally functional for men and women or is custom fit for the wearer.

Identifies challenge?	Yes, specific
Plan to address challenge?	Yes, specific
Tone	Considerate, closely involved in training and attentive to trainee experience

Addressing Student Finances

Several students from economically disadvantaged backgrounds have told me they are reluctant to continue in graduate studies because the standard stipend was insufficient to support them and they were reluctant to take on more student debt. This creates a barrier to their inclusion in my institution. Using data from Living Wage Ontario, I calculated that the minimum living wage for an independent adult in Ottawa is $28K. I revised my group budget to allocate more to graduate stipends so that all students in my group will be paid a living wage.

Identifies challenge?	Yes, specific
Plan to address challenge?	Yes, specific
Tone	Considerate, concrete, practical

Address Issues in Career Progression

Many of the best careers for my students are in federal service positions where fluency in French is required. Many New Canadians and students from disadvantaged backgrounds have not had the opportunity to achieve fluency in French, creating a barrier for them to progress professionally in our field. To address this, I have arranged for my grad students to attend French classes through the university and my students will have the opportunity to live and work in a Francophone environment through exchanges with my collaborator at UQAM.

Identifies challenge?	Yes, specific
Plan to address challenge?	Yes, specific
Tone	Insightful, forward-looking

Missteps: I'm Already Doing Great

Although women and racialized scientists are underrepresented in my institution and field, this has not been an issue in my group. 75% of my trainees are women, 65% are visible minorities, and two have disabilities.	
Identifies challenge?	Yes, but you are saying you've already solved it for your group, so it's not a challenge you will act on.
Plan to address challenge?	No (but you could say that you will continue the practices that led to this success)
Tone	Proud, but complacent, oblivious, and indiscreet

You should not be reporting lab demographics. There are undoubtedly further issues you could address (e.g., other underrepresented groups, careers after graduation). You must describe your actions, even if it is to continue your actions that have been effective.

Missteps: Broad Political Statements

I am a true advocate for greater inclusion of women and visible minorities in the sciences. I am committed to serving as an ally to these communities to improve equity in my discipline. STEM has excluded BIPOC for too long and I will make it my mission to center their voices and be an anti-racist force in the sciences.	
Identifies challenge?	Not specifically
Action to address challenge?	Not specifically
Tone	Passionate, but grandiose and vague

Missteps: Defiance

We will hire the most qualified people based upon their skills and mutual interests in organic synthesis.	
Identifies challenge?	No
Action to address challenge?	No
Tone	Defiant, Contrarian

Missteps: Relying on Institutional Actions Alone

Underrepresentation of women, indigenous students, and visible minorities is an issue in my field and institution. Our university's Human Rights Policy and Procedures prohibit discrimination against these groups in the admission process. Our institutional Violence and Harassment Prevention Program provides mechanisms to prevent and address harassment of students from these groups. The Centre for Indigenous Initiatives at my university provides a safe space and academic supports for indigenous graduate students. Women in my group also have access to a mentorship program provided by our faculty of graduate studies. All advertisements for graduate and staff positions contain an inclusivity statement and are reviewed our human resources department to ensure there is no discriminatory or exclusionary language. I will continue to follow these antidiscrimination policies and procedures and make HQP aware of these supports and policies.

Identifies challenge?	Sort of
Action to address challenge?	Sort of
Tone	Generic and disinterested, but detailed and comprehensive. Better than nothing.

If you are not confident writing an EDI statement, you should work with the Research Facilitators to craft a statement

Missteps: Watch Your Tone

Problematic Version	Issue	Revised Version
Female graduates from my group have been just as successful as the male graduates.	Patronizing, outdated tone. Conflates gender and sex.	I am very proud that many women who have graduated from my group have had exceptionally successful careers.
Students who violate the group code of conduct will be expelled.	You do not have the authority to expel students summarily and the tone is unsettling.	If the code of conduct is not followed, I will meet individually with HQP to reiterate the expectations and involve the university administration if there was a serious violation of university policy.
I will ask my trainees what their sexual orientation is and if they are transgendered so that I can ensure protections for them are in place.	It's creepy for a supervisor to demand very personal information from their students.	I give an annual presentation on my philosophy of supporting trainees to the greatest degree I can, then meet with each new trainee individually to give them an opportunity to discuss the challenges they face and what support we can give them.

Misstep: Including Demographics or Identifiable Data

- NSERC explicitly discourages applicants from including demographics of your group
  - High diversity in trainees does not automatically correspond a good score; your proposal is assessed by identification of challenges and proposed actions
- Aggregate data for discipline may be useful
- Specifically identifying students benefiting from EDI initiatives is also discouraged

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Important: trainee demographic data is not requested, nor required to assess impacts related to equity, diversity and inclusion in the research and training environment.

My group has an excellent record of diversity. 72% of my graduate students have been visible or sexual minorities and 63% have been women.

How did you collect this information? How were the questions worded? Did your students have a real choice in responding? What steps did you take to protect the privacy of HQP now and in the future? What does this prove anyway?

Valid Uses:

A study published in Phys. Rev. Phys. Educ. Res. found that 74% of women in physics had experienced some form of sexual harassment.

One former member of my group, Sierra Pan (formerly Steven), is neurodivergent, a visible-minority, and member of the GLBTQIA+ community. She withdrew from the PhD program during the pandemic because of her mental health.

This is an extreme violation of a student's privacy for the benefit of the applicant's grant application. Even with their consent, it's crass and accomplishes nothing.

Tone

Well Received
- Positive
- Constructive
- Open-minded
- Thoughtful
- Practical
- Considerate
- Attentive
- Reasonable
- Fair

Poorly Received
- Defensive
- Defiant / Contrarian / Angry
- Dismissive
- Disinterested / Perfunctory
- Self-righteous
- Dramatic
- Tone-deaf
- Impractical
- Out of touch with reality
- Insensitive

Supervisors who seem invested and concerned about the success of their students do better on their HQP ranking.

Approach your EDI section like you would the proposal: think about it, do a literature review, come up with insightful and innovative ideas, get feedback from other people, edit it carefully.

It's hard to judge how your tone will be perceived. Get feedback from colleagues.

Think Local: Workplace Adjustments

- You must address issues in your *institution* **and** field
- Consider your lab as workplace; what human resources / human rights policies should you have in place regarding EDI?
  - Policy for recruiting and selecting people for positions
  - Procedures for reporting and resolving harassment, aligned with university policies
  - Accessibility and accommodations for disabled or neurodivergent group members
  - Support for student parents; daycare availability, working hours, leaves
  - Equipment and work conditions disparities due to sex (ergonomics, amenities, field work safety, exposure to teratogens...)

Your Job Isn't Done When Your Grant is Submitted

- **Work with colleagues to establish a departmental EDI policy.**
  - e.g., non-discrimination in admissions, seminar/award selection, …

University of Alberta Department of Chemistry EDI policy:
https://www.ualberta.ca/chemistry/news-and-events/news/2020/august/edi_post.html

You are probably doing a lot of this stuff already! All members of your department can reference the policy if it's written down and is a structural action.

- **Monitor announcements by university and NSERC regarding EDI policies.**

- **Keep EDI in mind; grants are much easier to write if you've been active on these issues.**

- **Normalize talking about EDI: find a way to talk with your colleagues about EDI issues comfortably**
  - read each other's proposals, give and accept criticism
  - good will and the benefit of the doubt - we all win if we're successful in our grant applications and EDI initiatives

Resources: Issues, Data, and Proposed Solutions

- Google "[your field] underrepresentation"
  - American Physical Society report and actions for increasing African-Americans in physics: www.aip.org/diversity-initiatives/team-up-task-force
  - American Physical Society report and actions: https://www.aps.org/programs/lgbt/upload/LGBTClimateinPhysicsReport.pdf
- Quantitative Reports and Prescriptive Strategies across disciplines:
  - AAUW: The STEM Gap: Women and Girls in Science, Technology, Engineering and Math https://www.aauw.org/resources/research/the-stem-gap/
  - *PISA in Focus* Why Don't More Girls Choose to Pursue a Science Career?
  - Jen Heemstra, *Chemistry and Chemical Engineering News*. How to create a supportive mental health environment in your lab
  - University of Georgia: Recruit and Retain Diverse Students
  - AIP Workshop: "How to Achieve Diverse, Equitable, and Inclusive Professional Meetings."

Questions?