Developing, Disseminating, and Diversifying Knowledge:
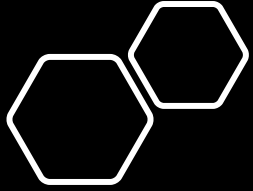# An Introduction to Equity, Diversity, and Inclusion (EDI) in Academia

Madeleine Elise Nadler
8 June 2021

Unifying Neuroscience and Artificial Intelligence in Quebec
UNIQUE Student Symposium (USS)
Day 2: Educational Sessions and Workshops

USS 2021
UNIQUE STUDENT SYMPOSIUM
June 7-8, 2021

Thanks,

Territorial Acknowledgment,

and Content Warnings

- Dr. Golnoosh Farnadi – AI Ethics

- Alex Hernadez-Garcia – One of the USS Organizers

- Jacek Chudy – Moderator

- UNIQUE Student Symposium (USS)

- Tiohtià:ke also known as Montreal is located on unceded Indigenous lands and waters of which the Kanien'kehá:ka Nation is recognized as the custodians and is home to many diverse Frist Nations people. In discussing topics such as EDI, ethics, Academia, knowledge, and science it is important to recognize relationships with Indigenous people as well as the ongoing effects of the past on the present and the future.

- Discussion of topics such as discrimination, medical abuse, child death, violence, racism, sexism, ableism, homophobia, transphobia

https://www.concordia.ca/indigenous/resources/territorial-acknowledgement.html

What is EDI? Why is it Important In and Out of Academia?

- Equity, Diversity, and Inclusion (EDI) / Inclusion, Diversity, Equity, and Accessibility (IDEA)

- Human rights, ethics, collaboration, innovation

- Acknowledging and accommodating different needs

ex. religious requirements, physical, invisible, and learning disabilities, mental health

- Countering pervasive inequality

ex. unconscious bias, disproportionate composition, representation, recruitment, retention, promotion, pay gap, leaky pipeline effect, glass ceiling
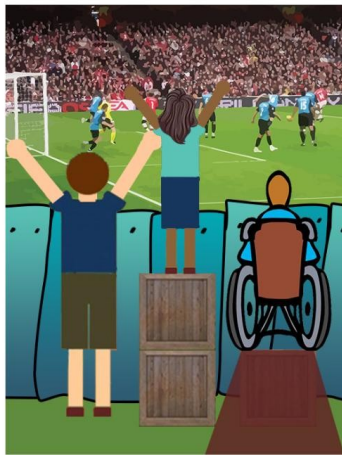
When systemic barriers cannot be removed - What is doable? What is effective?

Increasing Presence of EDI in Academia:

...mittees and policies

...p and mentorship programs

...roups and advocates

...odations

...accessible locations, extra time, use of learning aids…

...rican Sign Language (ASL) interpretation

- Live captions

...rritorial acknowledgments

...ntent warnings

...un tags

Equity vs. Equality

Same Treatment

Equitable Treatment

The systemic barrier has been removed. This is Equality.

www.canadianequality.ca

Some Basics

- LGBTQAI2S+: Lesbian, Gay, Bisexual, Transgender, Queer, Asexual, Intersex, Two Spirit, and inclusion of other identities   (nonbinary, agender, pansexual, polyamorous…)

- Pronouns – she/her, him/his, they/them, il, elle, iel (others ex. ze, hir…)

* Mistakes – natural and can happen, important to apologize, practice, correct self and others without making a big deal and move on

- Asking about Identities and Cultural Background (gender, race, religion, ethnicity…)

- Accommodations (physical disabilities, mental health, religious needs, caregiving…)

- Appropriate time and place – where you are, who you are with, is it safe, why are you asking, is it relevant
- Volunteering own information first
- Respecting privacy and nondisclosure, not pushing
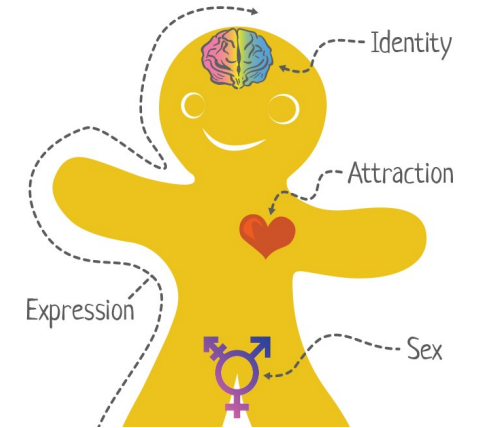
"Hi my name is Madeleine, and my pronouns are she and her. What are your names and pronouns?"

"If you are comfortable, may I ask for your name and pronouns?"

"Do you know what their name and pronouns are?"

"That is Alex, they are our team lead, you should get to know them"

"I'm researching the cultures of LGBTQAI2S+ people living in Montreal. Is it ok for me to ask about your cultural background?"

"We are measuring the demographics of our department. Do you mind my asking about your identities?"

"Please let me know if they are any accommodations you need"

https://www.brynmawr.edu/sites/default/files/asking-for-name-and-pronouns.pdf

https://jezebel.com/how-to-ask-someone-about-their-ethnicity-without-being-758679070

EDI in Academia

1. Who is Being Taught

2. Who is Teaching

3. What is Being Taught

Who is Being Taught

Who is excluded from Academia?

Economic Status

Disability

Mental Health

Race

Religion

Gender

Sexuality

Additional barriers, unequal life chances and opportunities, disproportionate composition

Learning from those around us, collaboration, exposure to new ideas and perspectives as fundamental to innovation

Who is Teaching and Researching

Women disproportionately underrepresented in high level job positions despite greater number of women graduates
(Säve-Söderbergh. "Gender Gaps in Salary Negotiations: Salary Requests and Starting Salaries in the Field." *Journal of Economic Behavior and Organization*. Sweden. 2019.)

Women make up 38.3 % of researchers in UK, Italy 34.5 %, France 26.0 %, Germany 25 %, Japan 13.8%
Denmark, Finland, Norway, and Sweden are popularly considered gender progressive but male researchers outnumber women 2:1 (Abramo et al."Gender Bias in Academic Recruitment." *Scientometrics*. Italy. 2016.)

Women as only 14% of peer reviewers, 18% of profiled researchers
Of 27.3m researchers who authored 5.5m research papers in the Web of Science database between 2008 and 2012, over 70% were men (Lundine et al."The Gendered System of Academic Publishing." *Lancet*. England. 2018.)

Women significantly underrepresented and gendered in STEM publishing, comprising 26-37% of new authors, editors, and peer reviews
- 35% aging neuroscience, 15% neurorobotics, 15% surgery, 5% robotics AI vs. 50% public health
(Helmer et al."Gender Bias in Scholarly Peer Review." *eLife*. Germany, United States, and France. 2017.)

Disproportionate composition of teachers and researchers effecting women, people of color, indigenous, disabled, LGBTQPAI2S+ people…

What is Being Taught – Academia

What is on a Syllabus / Reading List
- Diversifying and Decolonizing Initiatives
    - Adding women, people of color, Indigenous people, disabled people, LGBTQAI2S+ people, non-Western perspectives

Critical Analysis
- Bias of teachers, authors, editors, translators
- Gaps, missing perspectives, devalued and erased knowledge
    - Limited perspective and flawed research design

What is Being Taught - EDI Concepts in Academia

- **Objectivity** – claim to be without influence

- **Subjectivity** – how someone experiences something, effected by influences

- **Absolute Truth** – concept of a universal fact

- **Epistemological Pluralism** – rejecting reduction, acknowledging complexity, knowledge from multiple perspectives

- **Interiority** – belonging to, inside perspective

- **Exteriority** – not belonging to, outside perspective

- **Ethnocentrism** – judgment based on own cultural values and beliefs

- **Cultural Relativism** – rejecting hierarchizing or moralizing cultures

- **Quantitative and Qualitative Data** – recording numerical values, characteristics, and experiences

- **Limited Perspective and Flawed Research Design**

What does the 'T' on the wall stand for?

What is Being Taught - EDI Concepts in Academia

- **Eurocentrism** – focusing European cultural values, beliefs, and experiences

- **Androcentrism** – focusing male perspectives and experiences

- **Cis-Heteronormativity** – focusing a binary conception of gender and heterosexuality as norms

- **Essentialism** - set attributes being fundamental to identity and function

- **Reductionism** – disregarding complexity with focus on core elements

- **Positionality** – the viewpoint a person occupies related to their identities and experiences

- **Intersectionality** – occupying multiple/converging identities and viewpoints

- **Unconscious Bias** – socially constructed and ingrained beliefs, socialized behaviour contributing to discrimination

- **Systemic Oppression** – institutional discrimination, disadvantages, additional barriers

- **Compound Discrimination** – amplifying and unique forms of discrimination based upon identity intersections

- **Vulnerable Populations** – groups more likely to face issues such as violence and discrimination in everyday life
  as well as areas like education, employment, housing, healthcare, and policing, hard to reach and hidden populations in research

What is Being Taught - EDI Concepts in Academia

- **Tokenizing** – limited inclusion, superficial representation

- **Identity Politics** – alliances for political power based around shared identities

- **Allyship** – supporting others outside own group and interests

- **Solidarity** – unity with different groups towards common goal

- **Coalitional Politics** – alliances for political power between different groups for mutual aid

- **By Us / For Us** – groups, initiatives etc. designed by and for a specific group

- **With You / For You** – working together with groups in design

Developing, Disseminating, and Diversifying Knowledge

Inclusion as innovation, new fields of study, interdepartmental and international cooperation

Open Knowledge / Free Knowledge

Open Science, Feminist Science, Indigenous Science

Women's/Gender/Sexuality Studies

Black Studies/Race Studies/Critical Race Theory

Indigenous Studies

Post-Colonial Studies/Diaspora and Transnational Studies

Disability Studies

Queer Studies/Queer Theory/Trans Studies

Interdisciplinary Studies

EDI in Academia, Politics, Historical and Current Events

- Alfred Kinsey – biology, taxonomy, Kinsey Reports from bestseller to backlash

- Magnus Hirschfeld – medical doctor, Institute of Sexual Science Research early target of NAZI book burnings

- Tuskegee Syphilis Study – not treating and studying the effects of syphilis on black men

- States seeking to ban critical race theory

- Residential Schools, Missing and Murdered Indigenous Women and Girls

Who benefits? Who is being excluded? What is being censored? Why?

(Hirschfeld, Magnus. *Transvestites*. Translation by Michael A. Lombardi-Nash, Prometheus Books, New York, 2003.)

Group of Characteristics A (Primary Sexual Features)		Group of Characteristics B (Secondary Sexual Features)	
1. Germ cell:	A¹	1. Hair:	B¹
2. Oviduct or Spermatic Duct:	A²	2. Larynx:	B²
3. Sexual Protuberance:	A³	3. Chest:	B³
4. Sexual Groove:	A⁴	4. Pelvis:	B⁴

Group of Characteristics C (Tertiary Sexual Features)		Group of Characteristics D (Fourth-Order Sexual Features)	
1. Orientation:	C¹	1. Emotional Life:	D¹
2. Approach:	C²	2. Manner of Thought:	D²
3. Disposition:	C³	3. Occupation:	D³
4. Manner of Activity:	C⁴	4. Clothing:	D⁴

Each one of these 4 × 4 or 16 characteristics can, then, as stated,

And again each of these cases falls under three more cases by variations of A³, which produces 3 × 9 or three squared (= 27) combinations. And so forth: for each of the 16 elements of the four groups of characteristics A, B, C, and D there is a trebling of the number. As a total number of all possible combinations, this produces three to the power of 16 or

43,046,721 combinations.

This enormous number could at first be surprising, since it equals approximately a third of the total number of the world population (estimated at 1,450 million); but with closer consideration it becomes not only under-standable but also could be considered as too small, because we observed that there are hardly two humans who are exactly alike. In appearance as well as in essence there is such an extraordinary number of deviations and nuances that each individual appears as somewhat distinct. This is true, as is scientifically verified here, especially of the sexual particularities

Things to Consider about EDI in Research

- Researchers – Positionality? Interiority? Exterritoriality?
  Composition of team, unconscious bias…

- Population of study – Exclusion? Invisibilization? Stigmatization?
  Flawed research design, limited perspective, categories, composition…

- Influences – Who benefits?
  Funding, publicity, politics…

- Who is conducting the study?

- Who/What is being studied?

- Why is this being studied?

- How is this being studied?

- Does the Where and When of the study effect the population sample of the study?

- How will this effect the population of study?

- Who else can this effect?

- What possible impacts and consequences can this study have?

Best Practices in Equity, Diversity and Inclusion in Research –
https://www.sshrc-crsh.gc.ca/funding-financement/nfrf-fnfr/edi-eng.aspx

Ethical and Inclusive Science

- Responsible Research and World Relationships
- Ethical AI
- Clean Energy and Climate Change
- Immunology and Virology
- Sustainable Industry
- Everyday Technology

- Who does this benefit

Research population? Corporation? Political party?

- How can this harm

- Collaboration

With other departments, countries, target population

- Transparency

Breakout Rooms

1. Introduce yourselves and ask questions

- Names (pronunciation)

- Pronouns

- Areas of study

2. Imagine designing a collaborative study

- Funding

- Recruitment

- Accommodations

3. Identify possible issues

- Biases (personal, institutional, social)

- Gaps (knowledge, perspectives, complexities)

- Who benefits

- Possible negative impacts

Resources, Tools, and Further Reading

Indigenous Ally Toolkit by Dakota Swiftwolfe & Leilani Shaw - reseaumtlnetwork.com/wp-content/uploads/2019/04/Ally_March.pdf

https://www.brynmawr.edu/sites/default/files/asking-for-name-and-pronouns.pdf

https://jezebel.com/how-to-ask-someone-about-their-ethnicity-without-being-758679070

Best Practices in Equity, Diversity and Inclusion in Research – https://www.sshrc-crsh.gc.ca/funding-financement/nfrf-fnfr/edi-eng.aspx

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