

ACTIVATING ALLIES:
A TRANSFORMATIVE INTERDISCIPLINARY STUDY TO SUPPORT INCLUSIVE AND
EQUITABLE WORKPLACE PRACTICES

A Dissertation Submitted to the
College of Graduate and Postdoctoral Studies
In Partial Fulfillment of the Requirements
For the Doctor of Philosophy
In the Interdisciplinary Studies Program
University of Saskatchewan
Saskatoon

By

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Abstract

Advancing equity, diversity, and inclusion (EDI) is needed in Canadian workplaces. Due to the complex nature of social change, multiple solutions are required to advance EDI. In this interdisciplinary and collaborative study, we defined and developed solutions to support workplace allyship — which I argue is needed to achieve a shift in workplace culture. First, I explored literature in disciplines such as rhetoric (communication), leadership, education, law, policy, and sociology. In exploring the literature, I identified the important roles that employees, leaders, and organizations have in contributing to change efforts and the urgency to advance change.

Allyship is a practice of inclusion where — through listening, learning, and reflection on personal experiences, and privileges — people actively support historically marginalized persons and communities in achieving their full potential. Throughout the study, the phenomena of workplace allyship has been explored in support of five equity-deserving groups: women, Indigenous peoples, visible minorities, persons with disabilities, and 2SLGBTQIA+ people. Additionally, an intersectional and transformational mixed-methods approach was used throughout multiple phases of the study.

After receiving research ethics approval, we conducted three data collection phases. In Phase 2, we interviewed 17 active allies and developed the Ally Activation change model. The Ally Activation model was then used to develop the Active Allies course in Phase 3. In Phase 3, we tested the Active Allies course with 26 participants in a Canadian engineering college, and in Phase 4, with 76 participants in the Canadian mining industry. This study has provided evidence as to how individuals can be trained to act as workplace allies who practice inclusion and leaders — potential allies with role privilege — can develop competencies and motivation to recognize inequities and remove systemic barriers. Our findings have implications for EDI researchers and practitioners, including on how to foster psychologically safe EDI learning environments, and how to reduce EDI backlash. Additionally, this study offers insights into why organizations and leaders should adopt trauma-informed approaches as part of their change efforts. This study provides evidence that organizations and leaders — through active allyship — can better support everyone to feel valued, to achieve their full potential, and to increase their likelihood of solving complex problems. And the time to take the next step towards transformation is now.

Acknowledgements

I am grateful to live, work, and study in Treaty 6 territory and the homeland of the Métis. As I strive to be an ally for Indigenous peoples, who have lived on these lands since time immemorial, I seek to learn and listen for ways to respectfully take action alongside them.

Many of my allies have contributed to the completion of this work. Thank you to my funders: International Minerals Innovation Institute, Mitacs, Vanier Canada, and Women in Mining Canada; to my industry and academic advisory committees; to Jovita Dias and Dr. Rosa Moazed, the Mitacs Accelerate Interns who supported the 3 data collection phases of this project; to the allies who shared their stories in the course videos and provided ongoing support through many phases of the project, in particular, Dr. Suzanne Kresta, Dr. Stryker Calvez, Bai Bintou Kaira, Michael Stahl, Philippe Lepage, Jessica Vandenberghe, Kim Hanson, Rob Jackson, and Brady Balicki; to the USask Media Production Group for creating the course videos; to Mine Shift for allowing us to share the DIGGER bystander intervention model; to the many reviewers, contributors, and participants who shaped the course, including Dr. Roberta Campbell-Chudoba, Rebekah Bennetch, and Sarah Gauthier. Thank you to my co-supervisors Dr. John Moffatt and Dr. Jeanie Wills for their valuable feedback and level headedness throughout the many moving pieces of the project. Lastly, thank you to my family for your continued support in my scholarly pursuits to lead and inspire positive change.

Dedication

To those who have faced workplace trauma, I hear you. I understand. You are not alone. It is not your fault. May the results of this work provide a positive impact in making workplaces more inclusive, equitable, and diverse.

To the active allies, I wish you all the best in your practice of inclusion and your journey to lead positive change!

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Glossary of Terms

2SLGBTQIA+

An acronym — two spirit, lesbian, gay, bi-sexual, trans, queer, intersex, asexual, and others — to recognize the diversity of genders, gender expressions, and sexual orientations.

Allyship

A practice of inclusion where — through listening, learning, and reflection on personal experiences and privileges — people actively support historically marginalized persons and communities in achieving their full potential.

Ally Activation Model

A change model which describes how individuals typically embark on their unique allyship journey, transitioning through various stages. The journey begins at a clear state of “unawareness”, proceeds through “awareness”, “support-seeking”, and “realizing” before the final stage where individuals become “leaders of change” (Peltier-Huntley & Dias, 2023).

Active Allyship

Taking actions to shift culture to be inclusive and to shift systems to be more equitable.

Anti-discrimination

Laws, policies, and human rights systems meant to prevent discrimination (Patrias, 2006).

Anti-racist

“One who is supporting an antiracist policy through their actions or expressing an antiracist idea” (Kendi, 2019, p. 13).

Bias

Preferences for one thing over another that are shaped by our culture and in turn shape our beliefs and behaviours (Nordell, 2021).

Black

In the context of Canada, refers to people of African or Caribbean descent.

Black Lives Matter

A social movement intended to address anti-Black racism that rose following the death of George Floyd in 2020 (Black Lives Matter, 2020).

Culture

Learned beliefs, values, rules, norms, symbols, and traditions that are common to a group of people (Northouse, 2013, p. 384). Culture is shaped not just by strategies and policies but by the norms and values present in everyday actions.

Discrimination

Subtle or exclusionary behaviour or actions from an aggressor to a receiver based on a difference in perceived categorization of diversity, often including an imbalance in power; behaviour may be unintentional, written or verbal; although the receiver may feel threatened and insulted, the aggressor's behaviour may not be intended to commit a personal attack, but likely is due to the aggressor's categorization of the differences of the receiver (Peltier-Huntley, 2019).

Disabled Persons

Or persons with disabilities, “means persons who have a long-term or recurring physical, mental, sensory, psychiatric or learning impairment” (Canada, 2023).

DIGGER

A bystander intervention and acronym for direct action, indirect action, get a co-worker, get an authority, engage the target, and record and report (Me Too Mining Association, 2019).

Diversity

Variety; can indicate a variety of ways of thinking, or be used to measure and describe educational, physical, gender, sexual orientation, religious beliefs, and/or racial differences; a lagging indicator often used to measure the demographics of men and women in an organization (Peltier-Huntley, 2019).

Dramatistic

Language-as-action, focuses on “the coaching of an attitude” to “induce cooperation” in an audience capable of responding, a process which Burke terms “secular prayer” (Burke, 1959, p. 322).

Engineer

A regulated profession involving the application of engineering principles to safeguard the public and the environment.

Equity

A “means of fairness of treatment for [people], according to their respective needs. This may include equal treatment or treatment that is different, but which is considered equivalent in terms of rights, benefits, obligations, and opportunities” (Pavlic et al., 2000, p. 5) and requires a deep understanding of historic marginalization.

Equity-deserving Groups

Also known as “designated groups” in the Employment Equity Act; includes women, Indigenous peoples, Black people, visible minorities, persons with disabilities, and 2SLGBTQIA+ (Canada, 2023). Additional groups, i.e. newcomers to Canada, may be considered equity-deserving or equity-priority groups due to historical or ongoing disadvantages.

Ethnicity

Is a means of grouping people due to their cultural background, which may or may not be related to racial factors. For the purposes of this research participants were primarily asked to identify their race and were given the option to identify other factors which may cause them to adjust who they are in the workplace, which could include ethnicity.

Feminist theory

Is complex, intersectional and interdisciplinary while seeking equality, freedom, and justice for all, not just for women (Ferguson, 2017, p. 269; Pavlic et al., 2000, p. 6).

Gender equality

A basic human right which denounces discrimination based on gender; included in the Universal Declaration of Human Rights (United Nations, 2015b).

Generative criticism

A rhetorical analysis method offered by Foss (2004) as a method for digging deeper into artifacts which catch a researcher's attention and a means for researchers to answer specific questions related to those artifacts.

Harassment

Overtly inappropriate behaviour that is communicated by physical, written, and/or verbal means and directed from an aggressor to a specific receiver at a specific time and place (Peltier-Huntley, 2019). A personal attack that is often directed due to an imbalance in power and has an element of unacceptance of diversity. Bullying is a form of harassment.

Human rights

The inherent rights that all people are born with as outlined in the Universal Declaration of Human Rights (United Nations, 2015b). In Canada human rights were embedded in the Canadian constitution through the *Canadian Charter of Rights and Freedoms, Part I Constitution Act* in 1982.

Inclusion

Involves both feeling a sense of belonging and experiencing psychological safety to be one's authentic self.

Indigenous

In the context of Canada, includes First Nations, Inuit, and Métis peoples (Vowel, 2016).

Intersectionality

An innovative and emerging field of study that provides a critical analytic lens to interrogate racial, ethnic, class, ability, age, sexuality, and gender disparities and to connect existing ways of looking at these structures of inequality, transforming knowledge as well as the social institutions in which they have found themselves (Collins, 2009, p. vii).

Kairotic Moment

An opportune moment in time when the right person does the right thing at the right time (Frost Benedikt, 2002; White, 1983).

Leadership

A process whereby an individual influences a group of individuals to achieve a common goal (Northouse, 2013, p. 5).

Meritocracy

A belief that systems, organizations, and professions are based on unbiased systems which reward individuals based solely on their qualifications and past performance; however, meritocracies often consider future performance, which is subjective and may be biased (Kaplan, 2015; King, 2022; UN Women National Committee Australia, 2015).

#MeToo movement

The MeToo Movement was founded in 2006 by Tarana Burke to support survivors of sexual assault (Me Too Movement, 2020). In the fall of 2017, the hashtag #MeToo gained in popularity due to the promotion of celebrity, Alyssa Milano and her cries to call out media mogul Harvey Weinstein's predatory behaviour towards women in the entertainment industry (Khomami, 2017). The movement has since spread to other countries and industries around the world.

Microaggression

Brief, common, verbal or non-verbal discriminatory slights or insults which are intentionally or unintentionally directed towards marginalized people and are experienced frequently by those belonging to marginalized groups in their workplaces; however, they are seldom brought to light (Harris, 2016; McKenzie & Halstead, 2017; Offermann et al., 2013).

Mining

In the context of Canada, involves realizing the economic potential of resource extraction through the efforts of human labour and the application of various technologies (Angus, 2022; Mouat, 1995; Russell, 1999).

Mining Association of Canada (MAC)

A not-for-profit organization with membership made of more than 50 businesses in the Canadian mining industry which promotes the interests of the mining sector to governments and the public.

Missing Murdered Indigenous Women and Girls (MMIWG)

A national inquiry in the high prevalence of missing and murdered Indigenous women, girls, and 2SLGBTQIA+ people in Canada which resulted in 231 Calls for Justice (National Inquiry of Missing and Murdered Indigenous Women and Girls, 2019).

Nominal

Data types defined by classification. The order of nominal data types has no meaningful order.

NVivo

A packaged software used to complete qualitative, rhetorical analysis within this study.

Ordinal

Data types defined by a ranked order.

Pay Equity

Policies and legislation remediations related to pay which provide “recourse for disadvantaged and historically discriminated against individuals” (Young, 2002, p. ii).

Path-goal theory

Originally proposed by Evans (1970) to understand “the effects of leader behaviour on the motivation of subordinates” (House & Mitchell, 1997, p. 260) to accomplish goals or tasks by emphasizing “the relationship between the leader’s style and the characteristics of the subordinates and the work setting” (Northouse, 2013, p. 137).

Privilege

“The absence of inconvenience, the absence of an impediment or challenge, and as such when you have it, you really don't notice it, but when it's absent, it affects everything you do” (Amaechi, 2020).

Proactive Allyship

Involves pre-planning ways to support underrepresented groups (De Souza & Schmader, 2022, 2024), such as mentoring someone from a marginalized group or learning about the social challenges groups of people may face.

Psychological Safety

An absence of harm or threat of harm to a worker (Canadian Standards Association & Bureau de normalization du Quebec, 2013a).

Racialized Person

An alternative term to describe visible minorities.

Reactive Allyship

Involves exhibiting inclusive behaviours in reaction to inequities, such as speaking up in the presence of bias or discrimination (De Souza & Schmader, 2022, 2024).

Rhetoric

Aristotle defined rhetoric as the art of finding in any given case the available means of persuasion.

Rhetorical analysis

A form of qualitative analysis that helps with understanding how communication is or is not persuasive.

Rhetorical exigence

A problem, with a sense of urgency, which can be solved with communication or discourse (Bitzer, 1968).

Trauma

An event or series of incidents which has negative, adverse effects on an individual (Greer, 2023).

Trauma-informed practice

“Broadly incorporates awareness of trauma and its impact across all aspects of organizational functioning, and is reflected in certain general principles (i.e., ensuring physical and psychological safety)” (Bargeman et al., 2021, p. 4).

Transformative mixed-methods design

Lifts up the voices of participants to develop a call for action using data sources that can challenge injustices and provide evidence that is acceptable to stakeholders (Creswell & Plano Clark, 2011, pp. 96 - 97).

Transformative paradigm

Acknowledges that multiple, socially constructed, realities can emerge; that knowledge is socially and historically located within a complex cultural context; that methodology should address power issues and discrimination through participant participation; and that ethical considerations should include respect, beneficence, and justice (Mertens, 2007, p. 216).

Truth and Reconciliation Commission

Documented the atrocities committed against Indigenous peoples due to the residential school system and created the resulting 94 Calls to Action (Truth and Reconciliation Commission of Canada, 2015).

SPSS

A packaged statistical software used to complete quantitative, statistical analysis in this study.

Visible Minority

“Means persons, other than [Indigenous] peoples, who are non-Caucasian in race or non-white in colour” (Canada, 2023, p. 2).

Wicked Problem

A complex problem that is dynamic, contextual, and requires a systemic solution rather than a single intervention (Rittel & Webber, 1973).

1 Introduction

1.1 Situational Social Context

Diverse groups are needed to solve complex global challenges. Organizations that treat individuals fairly while fostering psychological safety and a sense of belonging are best equipped to leverage the benefits of diversity, thereby positioning them to address complex problems. These values of equity, diversity, and inclusion (EDI) are so important that they have been engrained in Canadian society and our constitution through the *Canadian Charter of Rights and Freedoms, Part I Constitution Act* (the Charter) (Canada, 1982). The Charter and related human rights statutes promote the ideas that everyone belongs and have the right to equal opportunities in Canadian society. Additionally, equitable, diverse, and inclusive workplaces have been found to be more innovative than traditional, homogenous workplaces and play a critical role in solving wicked problems like climate change and automation (BCG, 2018). Conversely, organizations and leaders that fail to promote inclusive workplace culture may be inadvertently fostering toxic work culture (Sull, Sull, et al., 2022; Sull, Sull, & Zweig, 2022) and violating human rights. Toxic workplaces — ones that are discriminatory, unfair, and even unethical — have a higher risk of limiting innovation and even losing the critical talent necessary to solve complex problems (Sull, Sull, et al., 2022). Despite protections offered by human rights statutes and evidence supporting EDI, diversity, equity, and inclusion remains lacking in many organizations and professions across Canada (Engineers Canada, 2022; Kay et al., 2016; Osler, 2021).

In recognition of the importance of a diverse and representative workforce, many organizations — including in the traditionally male-dominated realms of mining and engineering (Engineers Canada, 2022; Peltier-Huntley, 2019) — are seeking to be inclusive and equitable to achieve proportional representation similar to their local communities. In addition to the urgency to address climate change, there is a growing awareness about social challenges in Canadian society due to a variety of social movements (Black Lives Matter, 2020; Me Too Movement, 2020) and institutional investigations which highlight human rights violations (National Inquiry of Missing and Murdered Indigenous Women and Girls, 2019; Truth and Reconciliation Commission of Canada, 2015). As a result, employees, community members, shareholders, and other stakeholders are increasingly demanding that organizations take steps to advance equity, diversity, and inclusion (EDI) alongside Truth and Reconciliation. Due to the complexities and intersections of social challenges in Canada, achieving an equitable, diverse,

and inclusive workplace is also a wicked problem — a complex systemic problem which may require many potential solutions (Rittel & Webber, 1973).

I spent the first thirteen years of my career working as a professional mechanical engineer in the Canadian mining industry. I was often the only woman in the room, the only woman in the engineering department. When I moved into a leadership role, I was one of a few who did not have a stay-at-home spouse to care for my two children. Today, Canadian industries such as mining and Canadian professions such as engineering still do not have proportional representation. Instead, there remains an over-representation of men. Men comprise approximately 85% of the workforce in both engineering and mining (Engineers Canada, 2023; Mining Industry Human Resource Council, 2023). In addition to the under-representation of women, many other equity-deserving groups are under-represented in these traditionally male-dominated workplaces. For example, Indigenous people in Canada comprise 5% of the Canadian population, 12% of the mining industry, and 1% of the engineering profession (Engineers Canada, 2019b; Mining Industry Human Resource Council, 2023).

Many studies have shown that under-represented and equity-deserving groups experience less psychological safety and belonging — a lack of inclusion — and face barriers due to inequitable systems, which leads to higher turnover rates and a loss of diversity. Additionally, because of low levels of psychological safety for underrepresented people and inequitable systems, there tends to be an even further over-representation of men in leadership roles (McKinsey & Company & LeanIn.Org, 2022) — often heterosexual, white, able-bodied men — and a high risk of under-reporting inequities and psychologically unsafe occurrences (Peltier-Huntley, 2022; Rio Tinto & Elizabeth Broderick & Co., 2022). I have personally experienced many instances of discrimination and harassment within my engineering career in mining. Furthermore, my Master's thesis analyzed more than 250 instances of discrimination and harassment that had occurred in the Canadian mining industry and predominantly impacted women (Peltier-Huntley, 2019). Shifting workplace cultures to be inclusive and systems to be equitable will result in greater diversity, and perhaps will even lead to proportional representation. However, shifting workplace culture requires systemic and proactive efforts (Catalyst, 2016; CCWEST, 2023; Faraday, 2020). As an EDI practitioner — someone who leads EDI change efforts — I work with leaders and organizations to identify proactive and systemic strategies to shift workplace culture. In this dissertation, I argue that to achieve a shift in

workplace culture, we need individuals to act as workplace allies who practice inclusion — and leaders — potential allies with role privilege — to recognize inequities and remove systemic barriers in line with the Charter.

1.2 Activating Allies Study

The multi-year Activating Allies study sought to answer the question, how can we engage, train, and support everyone to act as “active allies”? The objectives of the Activating Allies study included learning from workplace allies about their allyship practice, about how workplace allies are activated to develop a practice of inclusion, and then testing interventions that support the development of active workplace allyship. I define workplace allyship as a practice of inclusion where — through listening, learning, and reflection on personal experiences, and privileges — people actively support historically marginalized persons and communities in achieving their full potential. In this study, I broadly applied the concept of allyship to encourage inclusion towards women, Indigenous peoples, visible minorities, persons with disabilities, 2SLGBTQIA+ people, and other under-represented or marginalized groups in the context of Canadian society.

The Active Allies study adopted an interdisciplinary and collaborative approach. This study focuses on workplace culture in traditionally male-dominated Canadian workplaces and draws on scholarship in the fields of sociology, rhetorical theory (communication), human rights, policy, and education. The project was collaborative in that it was guided not only by an interdisciplinary academic committee but also an industry committee, facilitated by the International Minerals Innovation Institute (IMII), which had representatives from four of the major mining companies in the province of Saskatchewan: BHP, Cameco, Nutrien, and Mosaic. Additionally, because of the generous IMII and Mitacs funding, two graduate students — Jovita Dias and Rosa Moazed — assisted on the project as Mitacs Accelerate Interns in the three data collection phases (Phases 2, 3, and 4).

The theoretical framework for this study incorporates a transformative mixed-methods design. A transformative design lifts up the voices of participants to develop a call for action using data sources that can challenge injustices and provide evidence that is acceptable to stakeholders (Creswell & Plano Clark, 2011, pp. 96 - 97). The project incorporated mixed-methods data to evaluate the intersectional complexity of social challenges and social change. Qualitative data was analyzed using rhetorical methodology, and quantitative data was analyzed

using statistical analysis. Further details on the analysis methods are offered in individual chapters.

The Activating Allies project consisted of 4 distinct phases and resulted in several publications. This dissertation consists of 5 separate manuscripts which have been published or are intended to be published as stand-alone articles. These separate manuscripts are contained in chapters 2 through 6. While Dias and Moazed are listed as co-authors on the papers to which they contributed, I predominantly led each study phase. I designed the methodology and led the collection, analysis, and reporting of each phase. A short description of our roles is included in the respective chapters.

To facilitate reading the dissertation, I offer a brief introduction to each of the manuscripts found in individual chapters. The dissertation begins with an introduction in Chapter 1. The next two chapters comprise the literature review, which explores human rights, social change, and allyship to understand better the individual and systemic barriers and levers required to facilitate inclusive workplaces. In particular, Chapter 2, (Phase 1a) summarizes the literature on individual actions connected to workplace leadership and communication relevant to mining and engineering workplaces. In Chapter 3 (Phase 1b), I evaluated the legal and policy systems related to human rights, which may support the creation of more inclusive workplaces in the context of Canada. In Phase 2 (Chapter 4), Jovita Dias and I conducted semi-structured interviews with 17 active allies nominated by their peers and developed the Ally Activation (change) model. In the project's third phase (summarized in Chapter 5), Rosa Moazed and I developed the Active Allies course to implement at the University of Saskatchewan's College of Engineering with undergraduate and graduate students, staff, and faculty. Through this pilot, I gathered feedback and compared participants' responses to pre-and post-training assessments. Next in the fourth phase, as summarized in Chapter 6, Rosa Moazed and I revised the course based on findings from the previous phase and conducted an additional series of pilots of the Active Allies course with 76 workers in the Saskatchewan mining industry. We again gathered feedback and compared participants' responses to pre-and post-training assessments. Finally, in Chapter 7, I discuss the implications of the Activating Allies project and offer recommendations to EDI researchers and practitioners.

2 A Leadership and Communication Perspective on the Literature

This chapter describes the problems related to workplace culture in the traditionally male-dominated mining industry from a leadership and rhetorical — persuasive communication — perspective and introduces the potential solution of allyship. In this chapter, I argue that Canadian mining organizations and their leaders are experiencing a *kairotic* moment — an opportune moment in time requiring action — and need to respond accordingly. This moment in time is due in part to the rise in awareness of social challenges, mentioned in Chapter 1, and The Mining Association of Canada’s (MAC) recent development of a new equity, diversity, and inclusion accountability framework. Now that the window of opportunity has opened, mining leaders need to act, both to support organizational change efforts and through everyday allyship actions. Specifically, leaders must demonstrate allyship behaviours in everyday *kairotic* moments and be prepared to respond to the bigger *kairotic* moments required to move organizations forward. This article may be significant in equipping change agents — necessary individuals who contribute to systemic change — in leading transformational change. The following manuscript, *Responding to the kairotic moment: Advancing equity, diversity, and inclusion through allyship in Canadian mining*, was written solely by me and published in the *Journal of Leadership, Accountability, and Ethics* in 2023.

2.1 Introduction

Recent social movements such as Black Lives Matter, #MeToo, and the Truth and Reconciliation Commission's Calls to Action have raised the awareness of social challenges to individuals and organizations within Canadian society. Additionally, impacts from the COVID-19 pandemic have caused an increase in resignations and retirements which have accelerated labour shortages forecasted in sectors such as mining (Mining Industry Human Resource Council, 2017, 2021a). In response to this combination of events, the Mining Association of Canada (MAC) (2020) issued a formal statement that “equity, diversity and inclusion are strategic priorities for our sector and are core values we share”. MAC is comprised of more than 50 mining companies across Canada and works to establish best practices in mining sustainability. MAC’s statement marked a pivotal, *kairotic* moment in Canadian mining. Since that time MAC has begun to develop equity, diversity, and inclusion (EDI) frameworks, which intend to hold mining organizations accountable and provide transparency in reporting as they strive to advance EDI across their operations.

In this paper, I argue that Canadian mining organizations and their leaders are in a *kairotic* moment and need to respond accordingly to calls to advance EDI and shift workplace culture within the sector. *Kairos* — while not commonly discussed in leadership theory — is an ancient Greek term that consists of the dimensions of “situational contingencies” and the “effort/desires of subordinates” (Kinneavy & Eskin, 1994; Sipiorea & Baumlin, 2002; White, 1983). Accordingly, *kairos* involves an understanding and awareness of context which may motivate individuals. Additionally, White (1983) describes *kairos* as “a passing instant when an opening appears that must be driven through with force if success is to be achieved” (p. 3). Thus, *kairos* contains elements of situational awareness and timeliness in taking action. Simply, Frost Benedikt (2002) describes *kairos* as “the right person doing the right thing at the right time and for the right reasons” (p. 233). In particular, leaders need to be aware and prepared to respond to calls to action in a timely and appropriate manner. MAC in particular, and the Canadian mining industry in general, have entered into a *kairotic* moment whereby this “window of opportunity” (Rothgang & Lageman, 2021, p. 238) has opened and an opportunity exists for action. The challenge then remains for mining organizations and the leaders within the industry to act. Organizations can act to establish EDI strategies, take steps to align actions with their “core values”, and engage leaders to operationalize EDI within the Canadian mining sector.

At this pivotal time, leaders and organizations risk missing opportunities to implement effective EDI processes, whether through failing to recognize *kairotic* moments for persuasive action or else through inattention to *kairotic* elements in the situations which are calling for action. While *kairotic* moments may be substantial — like the COVID-19 pandemic — or small — like speaking up about an offensive comment in a meeting — the result of acting or failing to act holds the potential to have a big impact on employees and organizational work culture. Those with situational awareness who act in the moment to support those in need can have a positive impact by ensuring that organizational values are modelled in daily occurrences (Warren et al., 2022). Importantly, those that act in these everyday *kairotic* moments to support EDI can motivate others to also take action. I noted, Frost Benedikt’s (2002) description of *kairos* which observes that the “right person must do the right thing at the right time” (p. 233); to build on that description we must consider how individual leaders will respond and engage in this call to action. Path-goal theory is one leadership theory that closely aligns with *kairos*; both concepts acknowledge that leadership styles and behaviours must shift to customize the persuasion of

people in different situations. Path-goal theory was originally proposed by Evans (1970) to understand “the effects of leader behaviour on the motivation of subordinates” (House & Mitchell, 1997, p. 260) to accomplish goals or tasks. House then advanced Evan’s work and “added considerable sophistication to the definition of the context, the range of leader behaviours considered relevant, and the causal mechanisms linking context and leadership to new criteria” (Osborn et al., 2014, p. 595). Although it is nuanced, the value of Path-goal theory is in emphasizing “the relationship between the leader’s style and the characteristics of the subordinates and the work setting.” (Northouse, 2013, p. 137). Additionally, Situational Leadership Theory is useful for recognizing subordinates' skills and motivations and promoting development (Blanchard et al., 1985). Therefore, *kairos*, Path-goal, and Situational Leadership theories require degrees of situational awareness for a leader to act in a timely and appropriate manner to effectively motivate and guide their subordinates to act inclusively.

The topic of *kairotic* moments and leaders’ responses to operationalizing EDI is significant to many organizations across Canada and beyond. Organizations which successfully advance EDI are thought to be safer, more innovative, and better places to work, and therefore have lower instances of employee turnover (BCG, 2018; BHP, 2020; Catalyst, 2004; Sull, Sull, et al., 2022; Thorpe-Moscon & Ohm, 2021). Additionally, organizations with equitable systems and inclusive cultures can better attract and retain a representative workforce. However, successfully operationalizing EDI is complex and nuanced. Advancing EDI requires a commitment of resources and may involve transformational changes which occur over several years. Organizations which are ineffective at navigating through this pivotal transition period risk falling behind their competitors, missing out on key talent, or being subject to reputational damage (Mata, 2016; Osler, 2021; Sull, Sull, et al., 2022). Answering the call to action to advance EDI in an appropriate and timely manner is therefore critically important to an organization’s success in a constrained labour market.

This paper will first describe the situational contingencies around how organizational culture in mining is most likely to be responsive to ongoing messaging around EDI. Next, I will describe the factors in the ambient culture which contribute to the time being optimal for substantive action. Finally, I will explore how key principles of Path-Goal and Situational Leadership theories might aid leaders in recognizing *kairotic* potentialities and developing appropriate responses to them.

2.2 Mining's Situational Contingencies

Certain elements in organizations and work cultures are most likely to be responsive to ongoing messaging around EDI. Understanding these contextual elements or situational contingencies is one of the two aspects of *kairos*. Furthermore, Frost Benedikt (2002) notes that “self-knowledge to be able to assess the situational context... without becoming constrained by too great a respect for the norms of the present” (pp. 230-231) is essential to recognizing *kairotic* moments. Norms within a parent organization may differ between regional locations, which is particularly relevant in resource and place-based industries such as mining. As a result of the cyclical nature of mining economics, mine sites and mining communities across Canada each have a unique history and have developed unique workplace cultures (Angus, 2022; Mouat, 1995; Rouse & Fleising, 1995; Russell, 1999). *Kairotic* moments, therefore, require leaders to have a deep understanding of nuanced situational contexts which may be specific to the sector, region, or organizations in which they work. Additionally, research by Lantz and Just (2021) found that “*kairos* is an ongoing and collective process in which organizational actors can influence the organization while also becoming influenced by the organizational context” (p. 12). Therefore, organizations and their leaders are both influenced by and shape the social contexts in which they operate.

Culture is “the learned beliefs, values, rules, norms, symbols, and traditions that are common to a group of people” (Northouse, 2013, p. 384). Similarly, work culture is influenced by the contextual elements of norms, rules, and traditions. In the Canadian mining industry, the business of mining involves realizing the economic potential of resource extraction through the efforts of human labour and the application of various technologies (Angus, 2022; Mouat, 1995; Russell, 1999). Furthermore, mining technology requires both a practical and dynamic application of science to ensure that natural resources can be economically and safely extracted and processed from naturally occurring geological formations. Even with the extensive application of technology, the dynamic nature of mining still relies heavily on people to do things ranging from manual labour to designing extractive technology (Mining Industry Human Resource Council, 2021a; Russell, 1999). Therefore, place, technology, and people primarily shape mining culture. Despite the key importance of people to mining, mining employment in Canada has been restricted primarily to “white men” (Karim, 2022); see Figure 2-1. In particular, colonial-era laws banned women from working in mining for decades (Nightingale et al., 2017;

Saskatchewan, 1909, 1940) and helped to shape mining culture into one often described as masculine, dirty, and physically demanding (Angus, 2022; Wick, 2002).

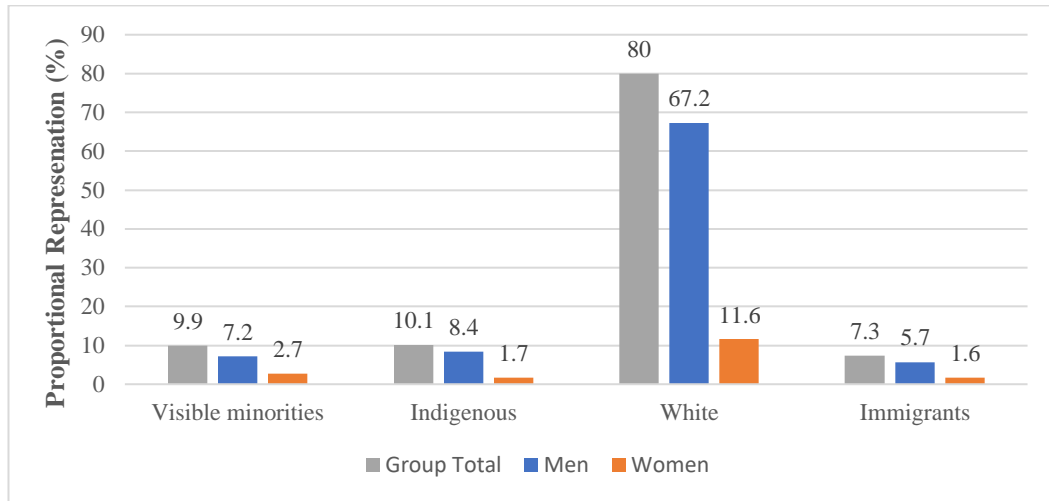


Figure 2-1: Intersectional Employment In Canadian Mining Industry (2016 Census Data derived from Mining Industry Human Resource Council, 2020; Ng & Gagnon, 2020)¹

Leaders are accountable to enact strategies which have the potential to influence workplace culture. Similar to the workforce, the leaders in Canadian mining are often white men. However, these leaders may not have lived experiences with witnessing or experiencing discrimination and harassment due to their relative power and privilege in Canadian society (Peltier-Huntley, 2019; Sonnenberg et al., 2021). As a result, they may fail to recognize everyday *kairotic* moments. Furthermore, those with privilege can be resistant to acknowledging and reflecting on their privileges (Johnson, 2006; Nixon, 2019), a necessary first step before leveraging one’s privilege to shift social systems. Additionally, these situational contingencies to which leaders will be called to respond to, require acknowledging and addressing instances of inequity that disproportionately impact women, Indigenous peoples, and other underrepresented groups (Peltier-Huntley, 2022; Rio Tinto & Elizabeth Broderick & Co., 2022; Thorpe-Moscon & Ohm, 2021). Employees in the majority groups may lack the motivation or knowledge to change their behaviour on their own. Furthermore, in moments following discrimination or harassment incidents, leaders or peers may be called upon to support those who have been on the receiving

¹ Note, that ethnicity and immigration elements in Figure 2-1 are not meant to add to 100% because some individuals may identify as more than one category.

end of inequities. Because of a lack of awareness or experience with inequities, leaders and others may fail to recognize the systemic and prevalent nature of discrimination and harassment and dismiss these as one-off instances or isolated personal conflicts (Howard, 2022). However, these disrespectful and psychologically unsafe behaviours, which may range from unconscious bias to sexual violence, are the result of cultural norms and are more likely to occur in traditionally male-dominated places, such as mining (Howard, 2022; Umereweneza et al., 2020). Mining leaders who can validate and support those who experience disrespectful behaviours and inequities can effectively shift the norms and culture of mining. Furthermore, mining leaders can prepare for these instances by taking bystander intervention training and by advancing their own awareness of challenges faced by underrepresented groups in their workplaces (Aday et al., 2022b; Cunningham et al., 2021; De Souza & Schmader, 2022).

Consistency is particularly important to the second dimension of *kairos* which considers the desires of subordinates. As outlined in Situational Leadership Theory, the development level — the degree of competency and commitment — of subordinates may differ (Blanchard et al., 1985). Therefore, for a leader to show consistency in promoting EDI advancement leaders may need to shift their leadership style to delegate, support, coach, or direct subordinates — as outlined in Blanchard et al.'s (1985) Situational Leadership Theory — to be seen as behaving inclusively. When considering EDI advancement, consistency and the psychological safety of subordinates are also critical. For leaders in mining to advance organizational EDI strategies, they will also need to be able to consistently and credibly interpret the past, present, and future values, practices, and priorities of an organization to the greater workforce (Lantz & Just, 2021). As mentioned previously, the mining industry highly values health and safety (Peltier-Huntley, 2022). Therefore, EDI strategies that link psychological safety with mining's values of health and safety have greater potential for success. Similarly, connecting EDI strategies to other strategic focus areas in mining, such as technological advancements to improve resource extraction's economics or reduce the environmental impacts of mining may indicate further organizational consistency. Furthermore, in line with recommendations from Lantz and Just (2021) and House's (1971, 1996; 1997) Path-goal theory, leaders who consistently and credibly align their understanding of EDI with their organization can help an organization to shift its work culture to one that practices allyship — a clear demonstration of supporting EDI.

2.3 Why EDI Now?

Various social movements, the global pandemic, and the current labour shortage across Canadian workplaces have created this *kairotic* moment. As documented in my Master's work (2019), various mining companies had been moving towards advancing EDI since the United Nations *Sustainable Development Goals* (UNSDGs) were developed in 2015. Due to the place-based nature of the natural resource industry and evolving laws related to Indigenous peoples in Canada (Joseph & Joseph, 2019), Indigenous peoples have engaged with mining companies in negotiations related to economic, environmental, and social advancements well before the start of the COVID-19 pandemic and the death of George Floyd in 2020 (Day, 2019; Faircheallaigh, 2013; Nightingale et al., 2017). As a result, long before MAC's EDI announcement, many mining organizations were already working to implement actions outlined by the Truth and Reconciliation Commission of Canada (2015) *Calls to Action*, United Nations (2007) *Declaration for the Rights of Indigenous Peoples*, and UNSDGs (2015b). MAC's 2020 EDI announcement also follows the formation of Women In Mining organizations across Canada, which have been established since 2010.

My previous research (2019) highlighted how the UNSDGs catalyzed some multi-national mining companies, such as Teck and BHP, to establish EDI strategies and take action. Since that time public sustainability reporting is now commonplace in the resources sector. Despite attempts at transparency and corporate accountability, employee and shareholder activism has been steadily increasing (Reitz & Higgins, 2022; Shecter, 2022) and peaked in 2020 (Black Lives Matter, 2020; Mining Industry Human Resource Council, 2021a). Frost Benedikt (2002) argues that "concern for *kairos* begins with an effort to recognize opportunity, making one sensitive to the critical character of moments requiring a decision. The decision concerning the right moment signifies understanding concerning this moment as distinct from others, concerning this moment as the culmination of a series of events" (p. 227). The social movements following George Floyd's murder coupled with the COVID-19 pandemic in 2020 created this distinct *kairotic* moment whereby activists demanded organizations respond. Although it had previously been silent on social issues, MAC recognized action was required (Karim, 2022). As a result, mining organizations and leaders collectively responded to this moment by issuing MAC's 2020 EDI statement and developing the *Towards Sustainable Mining Inclusive and Respectful Workplace* framework which was issued for public comment in 2022 (Karim, 2022). The

development of this industry-wide standard is a clear recognition of the *kairotic* moment whereby action needs to be taken towards advancing EDI.

2.4 Engaging Leaders in EDI Implementation

Leadership is “a process whereby an individual influences a group of individuals to achieve a common goal” (Northouse, 2013, p. 5). While organizations must recognize and respond to substantial *kairotic* moments, much of the success of EDI advancement hinges on the capacity to recognize everyday *kairotic* moments and take appropriate action. Culture is shaped not just by strategies and policies but by the norms and values present in everyday actions. Therefore, leaders, in particular, hold a large amount of influence in recognizing and responding to everyday *kairotic* moments. My previous study (2019) found that front-line mining leaders, in particular, were not engaging in EDI discussions and, as a result, employees viewed leaders as being inconsistent with their organizations' values. Front-line leaders who fail to engage in discussions around EDI advancement can erode the credibility of the organization and senior leaders who intend to advance EDI, ultimately maintaining the status quo. As a result, women, as an underrepresented group, are less likely to see their values reflected in the mining organizations and, thus, often feel less valued (Peltier-Huntley, 2019). To effectively shift workplace culture, leaders need to consider the values of *all* employees while aligning their needs with the organization. Path-goal leadership theory, in all its complexity, relies on leaders selecting the right behaviour at the right time to motivate their employees (Evans, 1970; House, 1971, 1996; House & Mitchell, 1997). Additionally, House (1996) argues that leaders will likely choose leadership behaviours based on their skills, abilities, and comfort levels and can supplement any deficiencies they may have by engaging other members of their team. Furthermore, similar to the concept of development levels of subordinates outlined by Blanchard et al. (1985) in the theory of Situational Leadership, leaders will need to be aware of the competencies (skills) and commitment (motivations) of their subordinates. Thus, to appropriately respond to everyday *kairotic* moments leaders need to be attuned to the motivations, competencies, and resulting behaviours of themselves and their employees.

In support of EDI advancement, allyship is the practice of fostering inclusion. Allyship requires taking action in solidarity with those from underrepresented and marginalized groups. In line with the theories of *kairos* and Path-goal leadership, leaders will need to practice allyship by developing allyship competencies and modelling inclusive behaviours to motivate employees to

adopt similar behaviours. De Souza and Schmader (2022) distinguish between reactive and proactive allyship. In reactive allyship, allies will exhibit inclusive behaviours in reaction to inequities, such as speaking up in the presence of bias or discrimination (De Souza & Schmader, 2022). Reactive allyship, therefore, requires awareness of the situation and timeliness of a response — *kairos* — and, as suggested by Path-goal and Situational Leadership theories, an understanding of the right response to guide an inclusive behaviour change in employees. Conversely, proactive allyship involves pre-planning ways to support underrepresented groups (De Souza & Schmader, 2022), such as mentoring someone from a marginalized group or learning about the social challenges groups of people may face. Proactive allyship requires awareness of situational contingencies — *kairos* — and identifying and developing employee competencies, as outlined in Path-goal and Situational Leadership theories, required to practice allyship. A combination of reactive and proactive allyship behaviours will enhance a leader's ethos — the credibility of their character outlined by Aristotle as involving goodwill, good judgment and good character (See MacLennan, 2009). Additionally, associating allyship with virtue ethics may be important for sustaining an ongoing practice of inclusion (Warren & Warren, 2021). Furthermore, leaders' inclusive behaviours have been shown to have a significant and positive effect on employee engagement with minority groups in the workplace (Randel et al., 2016). Therefore, leaders will need to adopt both reactive and proactive allyship practices, using an understanding of *kairos*, Situational Leadership theory, and Path-goal theory, to effectively motivate employees to support EDI advancement through developing an allyship practice.

Leaders and employees can develop their allyship or inclusive practices by establishing a personal action plan to enhance their reactive and proactive allyship behaviours. A personal action plan will support potential allies to increase their awareness and ability to recognize and respond to everyday *kairotic* moments. For example, a leader may recognize they want to enhance their skills to better address workplace microaggressions, so they include the proactive action to attend a bystander awareness course on their personal action plan. Through learning and practicing bystander interventions the leader may feel more confident to speak up and creating a more psychologically safe workplace for others. Furthermore, in line with Path-goal and Situational Leadership theories, leaders can guide employees to establish their own action plans to develop allyship competencies and behaviours. Leaders can also model their desire to

become an ally by sharing their personal action plans with employees. Previous studies indicate that accountability is especially important to motivate men to adopt inclusive practices (De Souza & Schmader, 2022). Therefore, in the male-dominated Canadian mining industry, establishing allyship action plans — such as the one described in the Association of Consulting Engineering Companies of British Columbia’s Allyship Guideline (ACEC-BC, 2022) — may be especially effective. Additionally, male allyship support groups can also provide a safe place to practice inclusive behaviours (Wilson et al., 2021). Catalyst’s Men Advocating Real Change (MARC) is an example of a male allyship support group to help men progress along their allyship journey. Furthermore, male allyship support groups can supplement skill deficits present in individual leaders, as House (1996) suggests, by allowing male leaders to engage with their peers to resolve inequities.

2.5 Conclusion

This paper has argued that Canadian mining organizations and their leaders are in a *kairotic* moment and need to respond accordingly to calls to advance EDI and shift workplace culture within the sector. If Canadian mining organizations fail to implement effective EDI strategies, they risk missing the substantial *kairotic* moment before them and falling behind other sectors. Similarly, if mining leaders fail to adopt allyship practices, they risk missing everyday *kairotic* windows of opportunity in which they can shift their workplace’s culture. Responding to the *kairotic* moment involves understanding the situational contingency or context. In the context of the Canadian mining industry, the existing work culture within the sector was shaped by legislation to be predominately male-dominated and white. The Mining Association of Canada has responded to the *kairotic* moment caused by increasing social pressures and is developing an *Inclusive and Respectful Workplace Framework* to advance EDI (Karim, 2022; Mining Association of Canada, 2020). As a result, mining leaders are now being called, in part by employee and shareholder activists, to advance EDI and transform mining culture which can attract and retain a diverse and representative workforce. Similar calls to advance EDI and transform cultures are being heard throughout many Canadian organizations. Leaders and employees need to seize the moment and be prepared to respond as allies in the many *kairotic* moments that occur in everyday workplace interactions. Leaders can set an example by adopting an allyship practice which fosters inclusion by incorporating an understanding of Path-Goal theory (Evans, 1970; House, 1971, 1996; House & Mitchell, 1997) and *kairos* as it applies to De

Souza and Schmader (2022)'s distinctions of reactive and proactive allyship. Additionally, leaders can evaluate the competencies and motivations of their employees to adopt inclusive behaviours using an understanding of developmental levels (Blanchard et al., 1985) and support advancement using allyship action plans. Through creating a personalized allyship action plan leaders and employees can develop inclusive skills and behaviours to best prepare them for the everyday *kairotic* moments required of allies. By acting as allies for all employees, leaders will be aligned with their organization's EDI strategies (logos), can act in alignment with employees' values and needs (pathos), and maintain their credibility (ethos) as agents for change.

3 A Human Rights and Policy Perspective on the Literature

The previous chapter explored workplace culture largely from the perspective of the role and responsibility that individuals can adopt in their workplaces. Leaders, in particular, play an important role in shifting workplace systems to be inclusive and equitable. In this chapter, I explore the problems related to workplace culture in the traditionally male-dominated mining industry and engineering profession from a human rights and policy perspective. To support an equitable workplace system, I explore the potential solutions offered by anti-discrimination measures — those which proactively address inequity in the workplace. These measures include increasing public awareness of inequities, facilitating inclusive skills building, and holding leaders accountable for workplace culture through public reporting measures. Workplace culture change requires a social transformation that may include a network of non-government organizations such as professional regulators, industry associations, not-for-profits, and individual corporations to collaboratively develop and proactively adopt anti-discrimination measures to create an ecosystem where all people can achieve their full potential. The following manuscript, *Accommodating workplace culture transformation: Human rights policy implications for advancing equity, diversity, and inclusion in Canadian engineering and mining*, was written solely by me and has been submitted for publication in 2024.

3.1 Introduction

Human rights laws are critical elements for “social engineering and transformation” (Adams, 2009, p. 50). The global human rights legislation transformation began with the formation of the United Nations, which was shortly followed by the *International Declaration of Human Rights* (United Nations, 1948). However, human rights legislation first appeared with *The Saskatchewan Bill of Rights* in 1947 (Saskatchewan, 1953). Today, legislators have implemented Canadian human rights at the federal, provincial, and territorial levels. While the scope and application vary across Canada, legal remedies exist for those who experience inequity based on many aspects of one’s identity, such as sex, race/ethnicity, gender identity or expression, sexual orientation, religion, and family status. Furthermore, human rights were firmly embedded in the Canadian constitution through the *Canadian Charter of Rights and Freedoms, Part I Constitution Act* in 1982 (Canada). The *Charter* outlines that “every individual is equal before and under the law” and allows for equitable solutions which address “disadvantages because of” one’s identity (Canada, 1982, p. 15). Furthermore, the *Charter*

ensures that rights outlined in the *Charter* should be equally accessible to men and women (Canada, 1982, p. 28).

As a result of the *Charter* and human rights statutes, there has been a decrease in overt discrimination in Canada (Majury, 2002). Conversely, social engineering has also negatively impacted the Canadian mining industry by systemically excluding women's full participation through legislation.² However, because of the *Charter*, legislation that once prevented women from working in the Canadian mining industry has been rescinded (e.g. Keck & Powell, 2000) and explicitly sexist corporate policies that limited women's careers have been revised (e.g. "Wiens v Inco Metals Co," 1988). Despite Canadian legislation which offers human rights protections, women in traditionally male-dominated industries continue to face inequities in their workplaces and at higher proportional rates than men (Peltier-Huntley, 2019; Rio Tinto & Elizabeth Broderick & Co., 2022). These inequities are perpetuated by biased behaviours, such as sexist and racist comments, and systemic discrimination perpetuated by biased systems, such as pay inequity (Peltier-Huntley, 2022). As a result of systemic and individual biases, many organizations and professions across Canada are striving yet struggling to retain a representative workforce that is reflective of the communities in which they operate and serve. For example, women in Canada make up 50% of the population and 47% of the workforce (Statistics Canada, 2022); however, in the Canadian engineering profession, women only comprise 14% of practicing professionals and 16% of the mining industry (Engineers Canada, 2020; Mining Industry Human Resource Council, 2018). Furthermore, the glass ceiling for women is the toughest to break in male-dominated fields, as women are more underrepresented in leadership roles in the mining sector than in almost every other sector and are also disproportionately underrepresented in engineering leadership (McKinsey & Company, 2021b; Rottmann et al., 2015). A cultural transformation is needed to address the systematic and often subtle inequities preventing equality for women and other marginalized groups in traditionally male-dominated workplaces, like mining and engineering.

² See e.g., *The Coal Mines Act*, RSS 1909, c 23, which stated: "No boy under the age of twelve years nor any woman or girl of any age shall be employed or be permitted to be in the workings of any mine" *The Coal Mines Act*, (1909).

In this paper, I argue that human rights frameworks can aid in advancing workplace cultural transformations by proactively addressing systemic inequities prevalent in traditionally male-dominated workplaces, like mining and engineering. I first compare the scope, implementation, and impact of the *Charter* and human rights legislation in Canada. Next, I summarize the status of women in mining and engineering and highlight cases that exemplify the types of discrimination faced by women in these traditionally male-dominated workplaces. Lastly, I explore relevant literature which showcases how human rights-centred frameworks can further influence policies and practices to improve the retention of women and other underrepresented groups in these workplaces. The scope of this paper primarily examines Canadian human rights systems as they apply to workplaces, as such, it does not provide a critical review of all laws and policies relevant to the mining sector, including those that may inform mining's relationship with the environment or Indigenous communities. The significance of this work is a novel examination of Canadian human rights and its implications for advancing inclusion and equity for underrepresented groups in workplaces. While I use the mining industry and engineering profession throughout the discussion, the value of this paper extends beyond these traditionally male-dominated workplaces and may support the implementation of policies and practices in other workplaces as they strive to achieve a representative and inclusive workforce.

3.2 The Ripple Effect of The Charter

As outlined in the introduction, the *Charter's* entrenchment in the federal constitution allows for the protection of human rights in Canada under the law. Canadian human rights statutes, including the *Charter*, protect fundamental freedoms, such as freedom of expression, freedom of the press, and freedom of association. Human rights statutes also create civil and political rights, such as protection against arbitrary detention; however, this paper focuses on anti-discrimination or equality provisions in human rights statutes. The *Charter's* constitutional powers improved upon the original 1960 *Canadian Bill of Rights*, which had limited practical application for protecting equality (Adams, 2019). Furthermore, the *Charter* was established to be a living document that would advance along with Canadian society. For example, in 1996, the interpretation of the *Charter* broadened to encompass sexual orientation; although, it was not until 2005 that same-sex marriage was legalized in the *Civil Marriage Act*. Likewise, while the *Charter*, which came into effect in 1985, “applies only to government actors and actions”

(Koshan, 2014, p. 115), the *Charter* creates a ripple effect that aids with applying fundamental freedoms throughout Canadian society in related human rights statutes.

Conversely, Canadian human rights statutes extend beyond interactions with the legal system or policies and include conduct between governments, private individuals, and businesses, including employment. For example, equality provisions in the *Canadian Human Rights Act* apply to interactions that individuals may have with the federal government, such as accessing goods, services, or facilities and receiving accommodations based on prohibited grounds. Human rights statutes are “considered quasi-constitutional”(Koshan, 2014, p. 141). Significantly, the *Canadian Human Rights Act* applies to employment agreements with the federal government and, as an example, includes provisions for pay equity based on sex. Federal legislation, such as the *Canadian Human Rights Act*, applies to federally regulated industries, like transportation, uranium mining, telecommunications, and banking.

Similar to the *Canadian Human Rights Act*, various provincial and territorial human rights statutes provide anti-discrimination provisions for individuals in accessing accommodations and services to the public and establishing business transactions, including employment contracts, within provincial or territorial jurisdictions (Canada, 2021). For example, the *Saskatchewan Human Rights Code, 2018* includes protections for rights relating to freedom of conscience, expression, association, arbitrary imprisonment, employment, property sales, or accessing a rental property (Saskatchewan, 2018). Furthermore, human rights legislation includes a means for resolution which is typically overseen by a human rights commission or tribunal in the appropriate jurisdiction. Resolutions for complaints and support mechanisms may vary slightly across Canadian jurisdictions and could include mediation, arbitration, tribunals, or accessing the courts. Commonly, the human rights commissions act as gatekeepers to interpret and guide human rights complainants through to resolution. Additionally, human rights commissions are frequently mandated to establish preventative educational programming.

Conversely, *Charter* complaints against a law or policy frequently proceed through the court system or administrative decision-makers, such as labour relations boards or arbitrators. When the Supreme Court issues a *Charter* decision it is intended that applicable legislative changes will ripple into effect throughout the country. The first Supreme Court case to respond to the *Charter* was *Andrews v Law* in 1989 (Butler, 2013). Since then, the interpretation of rights has continued to evolve through court decisions. Milestone court rulings that positively impacted

women include recognizing sexual harassment as sex discrimination ("Janzen v. Platy Enterprises Ltd.," 1989), recognizing pregnancy discrimination as sex discrimination ("Brooks v. Canada Safeway," 1989), and legalizing abortion ("R. v. Morgentaler," 1993).

In reality, the ripple effect from Supreme Court decisions can have different implementation outcomes in each jurisdiction, which Koshan (2014) argues may be linked to masking known prejudices. As a result, White (2014) argues that Canada's federalist system allows for disparities in access to accommodations and resolutions across the country. For example, accessing reproductive rights and same-sex marriage rights can vary widely depending on where one lives in Canada (White, 2014). Furthermore, accessing equal pay for equal work has proven to be difficult to identify and remedy. Despite pay inequities being well documented as a form of prohibited discrimination for decades, not all Canadian jurisdictions have systems and policies to support pay equity (Faraday, 2020; Pay Equity Task Force, 2004; Young, 2002). Furthermore, even when legislation is in place to support pay equity claims, reactive resolution processes have proven to be largely inaccessible to those without the backing of a battle-ready union (Faraday, 2020). Proactive pay legislation exists in Ontario, Quebec, British Columbia, and at the federal level, while some provinces—like my home province of Saskatchewan—have no pay equity legislation. It seems that recognizing human rights and realizing fair and equitable access to these rights are two different things in Canada.

3.3 Positive Impacts on Institutions and Workplaces

Generally, the *Charter* and human rights legislation across Canada have had a positive impact on the everyday lives of many Canadians. Early in Canada's history, many groups of people have experienced discrimination, as legislation and common law court decisions were largely made by and for the benefit of upper-class, heterosexual, cis-gendered, white, English-speaking, able-bodied men. For example, in Canadian history:

- Women's voting, reproductive, and financial rights were abdicated to their husbands (Inwood & Van Sligtenhorst, 2004; Sharpe & McMahon, 2008),
- Indigenous Peoples' rights were restricted under the *Indian Act* (Vowel, 2016),
- Disabled people were institutionalized and sometimes sterilized (Xu & Baheerathan, 2021),
- Racialized minorities were treated with racism and segregation (Bernáth, 2017; Stanger-Ross, 2020), and

- Homosexuality was treated as a “sin, sickness, or crime” (Warner, 2002, p. 28).

Over the past half-century, challenges faced by equity-deserving groups in Canadian society have been brought to light in several reports (Abella, 1984; Royal Commission On Aboriginal Peoples, 1996; Royal Commission on the Status of Women in Canada, 1970; Xu & Baheerathan, 2021). Awareness of these societal inequities helped shape the *Charter* (Baines, 2005). Additionally, L’Heureux-Dube (2000) argues the *Charter* brought with it “the positive effect of making the relationship between judicial decision-making and societal values more transparent” (p. 400). As a result of the *Charter*, many unique rights of individuals are now protected, and Canada is frequently recognized as a global leader in human rights. Furthermore, Canada’s human rights legislation has positively impacted social expectations — for example, women have meaningfully increased their participation in the workforce (Lippa et al., 2014), can legally access abortions (White, 2014), have better access to childcare and pregnancy leaves (Kapur, 2017), and can marry or divorce whomever they like (Irvine, 2015). Pay equity gaps have narrowed across many industries and professions in Canada due, in part, to proactive pay equity legislation’s positive impact on creating accessible data (Kapur, 2017; Pay Equity Task Force, 2004). Marginal progress has also been made to diversify who sits on boards and in government seats (Osler, 2021). Similarly, professions like law and medicine that were once male-dominated are approaching gender parity (Canadian Medical Association & Federation of Medical Women of Canada, 2021; Federation of Law Societies of Canada, 2018).

However, progress has not been equal across all industries, and advancements remain out of reach for some. There has been the least progress for those in lower socioeconomic groups and those who exist at the intersection of multiple marginalized identities (Ng & Gagnon, 2020). Intersectionality is a concept coined by Crenshaw (1989), who recognized that Black women faced compounding challenges of racism and sexism. Similarly, depending on a person’s identities, one may face overlapping and compounding challenges due to homophobia, ableism, ageism, and other forms of discrimination. In Canada, Indigenous women and girls experience a higher proportionality of violence, sexual violence, and murder compared to other demographic groups (National Inquiry of Missing and Murdered Indigenous Women and Girls, 2019). Intersectional challenges also exist in the workplace. As such, women who are also Indigenous, Black, a member of a racialized minority, disabled, or 2SLGBTQ+ are more likely to be under- or unemployed and underpaid compared to white and able-bodied women (Ng & Gagnon, 2020).

Individuals belonging to more than one equity-deserving group clearly face intersectional systemic challenges.

Due to the uneven progress, many scholars criticize whether human rights gains have been enough. Scholars like Godley (2018) and Kapur (2017) highlight the persistent prejudice that women experience, resulting in discriminatory treatment in hiring, promotions, and pay. Furthermore, Koshan (2014) argues that inconsistencies in court decisions can perpetuate discrimination and placing the onus to prove discrimination on the victim is unjust. Requiring individuals to seek resolution to systemic problems is not practical or just. Human rights frameworks were originally premised on the notion of providing a combination of both proactive and reactive measures (Adams, 2009). In alignment with the intent of human rights statutes, Clément (2017) calls for policymakers to rethink human rights legislation with an added focus on prevention—through education and training—and accessible support to resolution for the most marginalized. What then might a proactive anti-discrimination approach look like in traditionally male-dominated industries, such as mining and engineering?

3.4 The Status of Women in Engineering and Mining

In the Canadian mining industry, the biggest constraints that the sector faces are centred on labour availability and remaining competitive in global markets while supporting the energy transition. To reduce the risk of labour shortages due to an aging workforce, mining companies are increasingly looking to hire local and representative workforces (Peltier-Huntley, 2019). A representative workforce in mining—which is often situated in remote and rural locations—inherently implies a higher percentage of women and the inclusion of Indigenous peoples. Since mining in Canada commonly occurs near Indigenous communities, mining needs to engage with and consider the needs of women and Indigenous people as well as other equity-deserving or underrepresented groups, including persons with disabilities, racialized minorities, Black people, and members of the 2SLGBTQ+ community. Currently, in the mining industry, Indigenous women remain underrepresented compared to Indigenous men (Mining Industry Human Resource Council, 2021b). During the COVID-19 pandemic, women in mining—who are often highly educated—were able to retain their employment in mining at higher rates than those with lower levels of education, which, due to Canada’s ongoing colonial policies, are often Indigenous peoples (Mining Industry Human Resource Council, 2021b). Furthermore, even though the retention of women in mining persisted through the pandemic, women in mining

remain underrepresented in all occupations and skill levels compared to women in other Canadian industries (Mining Industry Human Resource Council, 2018).

Women in the mining industry and women in engineering face several challenges due to their gender and at the intersections of other aspects of their identities, despite often being highly qualified and educated (Hughes, 2012). These challenges result in lower levels of representation in leadership, pay inequity, and higher levels of discrimination and harassment, which are often exasperated by the rural and remote work conditions required in the natural resource sectors. In the remainder of this section, I explore some common types of discrimination that women in mining and engineering face, including sex discrimination, sexual harassment, bullying, retaliation, sexual assault, and family discrimination. The examples shared in this section are captured from public court records accessible through CanLII. The methods for finding these cases included using keywords of mining, sex harassment, sex discrimination, pregnancy, and family status. To aid with the further discussion on paths to resolution, I also offer details on the length of time for resolution, note if the complainant and defendant were unionized—which is atypical of those in the engineering profession—and share details on the resolution process and outcome offered to complainants due to their hardships.

3.4.1 Sex Discrimination

Legal barriers once prevented women from working in Canadian mining. In Ontario, these legal barriers remained until 1978, when women were allowed to work in underground mining operations (Keck & Powell, 2000). Even once legislators removed these barriers, company policies and cultural norms have prevented women from working in all areas of mining. In the 1988 case of *Wiens*, the Human Rights Tribunal of Ontario found that Inco Metals Company had discriminated against the complainant, Laurene Wiens ("*Wiens v Inco Metals Co.*" 1988). Furthermore, the Human Rights Tribunal found Wiens was discriminated against because of her sex. Inco's policy was to prohibit any women of child-bearing potential from working in certain areas of the plant due to the risk to unborn fetuses from nickel carbonyl gas. Previous research has found that this gas may affect the development of animal fetuses. As a result, many engineering controls had been put in place to minimize exposure of the gas to all workers. Despite the well-managed risks, Inco's policy singled out women of child-bearing potential. The Tribunal concluded the potential for a woman to become pregnant has no effect on her job and that a more reasonable policy would be to move women who are pregnant or trying to become

pregnant from working in that processing area. The courts resolved this case seven years after the complainant filed their case. Lastly, the complainant was supported by her union through the complaint process.

3.4.2 Sexual Harassment and Bullying

In many jurisdictions, severe discrimination may be labelled as harassment. Additionally, many Canadian legislations recognize that if discrimination is reoccurring, it may also be considered bullying. In 2020, the Saskatchewan Labour Arbitration Board ruled in favour of dismissing a grievance in *Unifor, Local 922 v Nutrien Ltd* ("*Unifor, Local 922 v Nutrien Ltd.*," 2020). In this case, a unionized worker, Nathan Hedlin, had been harassing and bullying a female dry attendant, Mary Wells. The arbitrator dismissed the grievance, as Hedlin had undergone training on Nutrien's *Respect in the Workplace* policy, and his behaviours were not in alignment with Nutrien's *Core Values* and *Code of Conduct*, to which Hedlin had also been trained.

The arbitration case outlines how the male harasser, Hedlin, bullied his co-worker, Wells—potentially the first female dry attendant at this mine site—for over two years. The unionized dry attendant position is responsible for taking care of the mine changerooms—commonly called the “dry” in mining—which are typically divided into separate spaces by gender, by employment type (union and management), and sometimes spaces for external visitors. The changerooms typically contain lockers, showers, and toilets.

The first incident involved the message of a sexual slur being left at Wells's work area. Despite an investigation of 50 employees, no one was found to be at fault.

Following this incident, Wells permanently moved into the dry attendant role. Management at the site then changed the procedure, intending to avoid uncomfortable situations for Wells where men may be nude or changing. The new procedure and signage instructed workers to use the visitors' dry if the dry attendant was cleaning the main dry. A few months later, Hedlin, ignoring the signs, stripped down to his socks and underwear in front of Wells. This violation of procedure was reported to management, and they suspended Hedlin for three shifts.

The next month Hedlin brought to work a sexually explicit t-shirt, wrote his locker number on it, and put it in the laundry for the female dry attendant to find. The female dry attendant “realized whose [shirt] it was and was very upset and almost embarrassed. I felt as though this was a direct and personal blow to me” ("*Unifor, Local 922 v Nutrien Ltd.*," 2020s. 11). Following the t-shirt incident, management terminated Hedlin's employment. Hedlin, with the

support of the union, grieved his dismissal but was ultimately unsuccessful at getting his job back.

While common in Canada, the union—to which Wells and Hedlin belonged—was obligated to support both its members through the arbitration process. Unions can, therefore, play an important role in resolving bullying complaints. The *Unifor, Local 922* case took 1.5 years to resolve from the time that management dismissed Hedlin until the arbitrator dismissed the grievance. As the labour arbitration case primarily focused on the question of whether the employer was justified in terminating Hedlin, the arbitration did not consider further justice for Wells. As such, the focus of the arbitration was not whether Well’s human rights were violated, and she was not awarded damages for her hardships. However, if Nutrien’s collective agreement had a non-discrimination clause and Wells brought forward a grievance, perhaps the arbitration could have considered retribution and justice for Wells.

3.4.3 Sex Discrimination and Retaliation

Due to the traditionally male-dominated nature of the mining industry or the engineering profession, it is common to have men-only events, as traditionally the workforce had been only men. In 2014 the Human Rights Tribunal of Ontario ruled in *McConaghie v. Systemgroup Consulting Inc.* that Sheryl McConaghie had been discriminated against based on her sex related to a men’s only event. In this case, Systemgroup, McConaghie’s employer, had organized a customer appreciation “Men’s Day” in 2012, which targeted cis-gendered, heterosexual men. Systemgroup advertised the event as “A Day for Men without Women and Children” and participants were invited to “Bring your friends, bring your acquaintances, just don’t bring your wife!” (“McConaghie v. Systemgroup Consulting Inc.,” 2014 , Para. 3). Furthermore, the event had entertainment for participants, including massages and “Hooters Girls.”

McConaghie raised her concern to her employer and senior leader about the inappropriateness of the event and how she was being excluded as a female employee. Shortly thereafter, Systemgroup fired McConaghie due to supposedly “poor performance” (“McConaghie v. Systemgroup Consulting Inc.,” 2014 , Para. 6). The Human Rights Tribunal of Ontario found that McConaghie was likely terminated due to speaking up about her rights and she was awarded \$15,000 in “compensation for injury to dignity, feelings, and self-respect” (“McConaghie v. Systemgroup Consulting Inc.,” 2014 , Para. 239). The *McConaghie* case took

two years from when the complaint initially occurred until resolution. McConaghie was not a unionized employee.

3.4.4 Sexual Assault at Work Camps

Despite the acknowledgement of instances of sexual assault at mine sites and work camps, sexual assaults are underreported in Canada (McKinsey Global Institute, 2017; National Inquiry of Missing and Murdered Indigenous Women and Girls, 2019; Rio Tinto & Elizabeth Broderick & Co., 2022; Umereweneza et al., 2020). As a result, there were very few criminal or human rights cases describing sexual assaults at Canadian mines or work camps found in CanLII.

One case which describes sexual assault at an Albertan work camp was a Worker's Compensation case ("Decision No.: 2019-0292," 2019). In this case, a male aggressor sexually assaulted the same female worker at a work camp twice within a month. The female worker reported the incidents to her management after the second occurrence and they told her to "keep quiet and do her work" ("Decision No.: 2019-0292," 2019 , Para. 33). The worker experienced retaliation rather than support from her employer following the incidents. Over the next year, the worker experienced stress and was diagnosed with PTSD due to the attacks. The worker chose not to file a criminal or human rights complaint but did seek worker's compensation. Initially, Worker's Compensation denied her compensation claim but the Workers Compensation Appeals Commission later granted an appeal in 2019, six years after the sexual assault occurred. It is unclear from the records if the woman who was sexually assaulted was a unionized employee.

3.4.5 Family Status Discrimination

Family status claims hold particular interest to the mining industry and the execution phase of engineering construction projects, which often requires working in remote or rural locations, living in fly-in-fly-out camps, and shift work. Additionally, the understanding of family status accommodations is continuing to evolve in Canadian courts. In the mining industry, caregivers often face limited availability and accessibility for childcare in the rural locations where they live, which meets the demands of a career in mining. When my children were young, I worked 10-hour shifts, four days a week while living in Saskatoon, a city of more than 250,000 people. The mine site that I worked at was located 75 kilometres from my home. With the time connecting with my carpool to the site, I was usually away from home for 12 hours per day. While my children were young, my partner had full responsibility for getting the children to and from childcare, as most childcare options did not accommodate my schedule.

A recent case relevant to the mining industry is the 2022 ruling in *Gibraltar Mines Ltd. v. Harvey*. Many parents who work at mines or shift work can relate to this case, as they try to balance managing their work, often at remote or rural locations, and caregiving commitments. In this case, Lisa Harvey and her husband are both unionized tradespeople at the Gibraltar Mine, which is located 60 kilometres from Williams Lake, and typically work the same 12-hour shift. Before returning from her first parental leave in mid-2018, Harvey and her husband tried to negotiate changes to their shifts with Gibraltar to allow them to access available childcare options in their rural community. Their main challenge was there were no available childcare options that accommodated their shifts, and the couple did not have access to reliable family support to bridge the gaps. The couple pursued avenues of self-accommodation, including taking vacation time to deliver the child to daycare or care for their child. Despite the couple's attempts to reconcile their work commitments and childcare responsibilities, they were unable to do so and ultimately requested a family status accommodation from their employer.

In the 2022 *Gibraltar* decision, the British Columbia Supreme Court ruled the BC Human Rights Tribunal had used the incorrect interpretation of the two-part test for family discrimination and that the complaint should be dropped. The argument from Gibraltar was the two-part test is based on a change of employment circumstances, not a change in family responsibility. Nearly two years after the first hearing and four years since Lisa Harvey returned from parental leave, the judge ultimately agreed with Gibraltar's argument and dismissed the case. Lisa Harvey was supported by her union to file the complaint.

3.4.6 Pay Inequity

Pay inequity in mining and engineering is well documented; however, many Canadian pay equity cases involve unionized workforces. The 2018 Supreme Court decision in *Quebec (Attorney General) v. Alliance du personnel professionnel et technique de la santé des services sociaux* was the first pay equity case to successfully uphold the charge of sex discrimination under section 15 of the *Charter* for the benefit of women in Canada's top court. In *Alliance*, the concern was rooted in access to information to bring forward pay equity claims originating from the implementation of Quebec's *Pay Equity Act*, which was enacted in 1996. As many women in mining and engineering are not unionized, access to pay information to initiate a claim would be challenging. Furthermore, Saskatchewan is one of the few jurisdictions in Canada that does not

have pay equity legislation. Unless proactive pay equity legislation is enacted in provinces like Saskatchewan, there is little hope that gender pay gaps in mining and engineering will be closed.

3.5 Proactive Solutions for Women in Engineering and Mining

The world of business and workplaces is shifting to be more socially aware while adopting new ways of working. A growing social awareness holds the potential to address the challenges that women and other underrepresented groups face in their workplaces. Commonly, organizations, such as professional regulators, corporations, associations, and governments across Canada are responding to social pressures and making an organizational commitment to change (Peltier-Huntley & Dias, 2023). In 2020, the Mining Association of Canada released a statement which acknowledged the industry values and the advancement of equity, diversity, and inclusion (EDI). Additionally, since the global COVID-19 pandemic, there has been a marked shift in the mining industry to accelerate automation efforts and normalize remote work options (Ng & Gagnon, 2020). As workplaces transition into post-pandemic ways of working, retaining remote work options will be critical to recruiting and retaining women, who still carry most of the caregiving duties in Canada. Additionally, the growing demand for organizations to advance EDI in Canada must be taken alongside meaningful actions toward Truth and Reconciliation.

Given the current motivation to incorporate social change in Canada, now is a good time to examine and implement proactive and practical solutions (Peltier-Huntley, 2023). Proactive anti-discrimination legislation policies may be applied in practice to support retaining women and other underrepresented groups in the engineering profession and mining industry. This section explores the following question: how might anti-discrimination systems be proactive in addressing challenges that women engineers or women-in-mining face and support retaining them in their professions and the resource sector?

3.5.1 Data, Analysis, & Reporting

Anti-discrimination policies afford a proactive approach to create accountability and transparency for important data. The key data relevant to EDI needs to include intersectional demographic data necessary for analysts to interrogate data by groups and sub-groups of people and highlight their differences in experiences and instances of inequity (Zheng, 2023). Once the data analysis is complete, leaders can set targets to close the gaps and take action. For example, current legislation supports reporting the diversity of boards and senior leaders, which is narrowing the gender gaps in corporate leadership teams (Osler, 2021). Setting targets is an

important step that organizations can take to overcome biases and ensure better representation of those who are otherwise underrepresented. Additionally, a representative board or senior leadership team may be better able to advance EDI in the rest of the organization. However, a Norwegian study found that senior leadership-focused equity legislation does not seem to have an effect beyond senior leadership (Ragni Hege & Mari, 2018). It seems that what gets measured, gets managed in EDI as well and that targets may need to be set throughout the organization.

Public reporting of advancement is also important to ensure accountability to close the gaps. Considering the Me-Too movement, Rhodes and Baron (2019) argue that discrimination-related data should be publicly reported to government agencies. We know from the implementation of human rights legislation that not all governments may adopt these measures. Instead, we propose that industry or professional associations take the lead as they collect and report key data. Such an approach would support workers to make informed decisions about where they work and when to raise complaints. Similarly, public reporting may inspire organizations beyond governments or regulators to create policies and programs to close the gaps. For example, the awareness of the challenges faced by women in mining has inspired the Mining Association of Canada (MAC) (2023a) to develop a framework to advance equity, diversity, and inclusion (EDI). Similar to other frameworks developed by MAC, the EDI framework holds the potential to introduce accountability and transparency for more than 50 mining companies in Canada, while also standardizing a mechanism for comparing mining corporations' EDI advancements or lack thereof. I am hopeful that MAC's framework will have a similar impact on board diversity targets in raising awareness and creating accountable strategies.

Studies have shown that effective leaders focus on key metrics and a supportive environment to lead transformational change (McPolin, 2014). Additionally, proactive government policies—which engage leaders in advancing EDI—have shown to be effective in gaining the support of EDI initiatives (Mining Industry Human Resource Council, 2021b). However, across Canada what one jurisdiction considers proactive may differ from another and as such, companies, associations, and professional regulators can take the lead in adopting proactive practices. Furthermore, if an integrated approach to advancing EDI is adopted, leaders can then be held accountable through their organizational policies and programs. The onus of

shifting culture then also shifts from the marginalized few to those in positions of power (Moser, 2018).

3.5.2 Pay Equity Policies

Pay inequity remains a challenge across many sectors and professions in Canada. Recently, the Association of Professional Engineers and Geoscientists of Alberta (APEGA) (2021) found that female engineers earn 11% less than male engineers. Furthermore, engineering professional regulators collect annual pay data from members and publish information allowing members to calculate their pay. The pay calculations do not include demographic factors, such as gender or ethnicity, despite that many studies show these identity factors can affect one's pay.

Alternatively, professional regulators could adopt a preventative anti-discrimination approach to pay equity, like the proactive pay equity legislation which exists in the provinces of Ontario, Quebec, and British Columbia, and at the federal level. Likewise, industry associations, such as MAC, could facilitate proactive pay equity accountability through public reporting. Additionally, associations or regulators could aid with resolving pay inequities occurring due to gender, ethnicity, or other factors like how a union might support its members. Furthermore, multi-national mining or engineering organizations can adopt proactive pay equity policies to ensure corporate pay equity policies are applied fairly across all locations, even those lacking proactive pay equity legislation. Instigating pay equity policies across all sites of business may even help to reverse the pay gap for women engineers in mining, allowing them to earn a premium for their skills (Leslie et al., 2017).

3.5.3 Activate Allies

Alongside organizational policies and programs to address systemic inequity, there is also a need for education and training for all individuals. Everyone is at a different level of their awareness of challenges faced by underrepresented groups and their motivation to use their relative power and privilege to lead transformational change. Additionally, to support the retention of individuals from underrepresented groups—those who may face disproportionately higher instances of discrimination and harassment in their workplaces—all employees have a role to play in ensuring their workplaces are inclusive. Inclusive workplaces are both psychologically safe and promote a sense of belonging. I define workplace allyship as a practice of inclusion where — through listening, learning, and reflecting on personal experiences and privileges — people actively support historically marginalized persons and communities in

achieving their full potential. As leaders carry more relative power in organizations, they can promote and support the necessary culture shifts by being trained to adopt allyship behaviours and establish a practice of allyship (Peltier-Huntley, 2023). Therefore, awareness and skill-building for potential workplace allies will be a necessary component of any anti-discrimination policies.

Mining and engineering workplaces already have systems in place which can be leveraged to develop workplace allies. My previous research showed the Canadian mining industry values and has extensive management systems which support workplace health and safety (Peltier-Huntley, 2019). Much like mandatory safety training in mining and engineering to recognize hazards and intervene, bystander training would be an essential part of anti-discrimination skill-building. Aligning anti-discrimination efforts and EDI skill-building to create respectful workplaces and support the psychological safety of underrepresented groups, such as women, in mining or engineering will, therefore, be important.

The mining industry is already working collaboratively to adopt an approach to promote respectful workplaces, as is evident in MAC's recently revised health and safety protocol, which now incorporates psychological safety (Mining Association of Canada, 2023b). Additionally, anti-discrimination efforts can align with promoting mental health and well-being alongside EDI. A study of the Australian mining industry found a correlation between mental health, instances of sexism, and belonging (Rubin et al., 2017). In particular, the Australian study found a link between organizational and interpersonal sexism (Rubin et al., 2017), which indicates addressing one may impact the other. Rhodes and Baron (2019) also argue that equity-focused legislation can further bolster companies to adopt anti-discrimination policies and ensure victims are supported through resolution. In the absence of consistent equity-focused legislation across all Canadian jurisdictions, organizations such as industry associations and professional regulators have an important role to play in creating an ecosystem that develops and promotes workplace allyship. Workplace allies will be required to champion the transformation of organizations to adopt and embed anti-discrimination policies.

3.6 Conclusion

Human rights laws in Canada are a critical element for “social engineering and transformation” (Adams, 2009, p. 50), a necessity to address systemic inequities which persist in traditionally male-dominated workplaces. While human rights legislation has been effective in

reducing overt discrimination in Canada, inequities persist in many avenues of our society for equity-deserving groups, including the workplace. Despite the differences in the scope and implementation of the *Charter* and human rights legislation in Canada, there have been many positive transformations impacting the lives of Canadians. Today, human rights legislation — including those embedded in the Canadian constitution — condones discrimination and offers paths to resolutions. However, recognizing human rights and realizing equitable access to these rights can be two different things in Canada. One’s location, persistence, and membership in a union are important factors in seeking justice.

Despite human rights legislation, those with marginalized identities continue to experience inequities in many Canadian workplaces. In traditionally male-dominated workplaces, women are disproportionately more likely to experience inequities and those without the backing of a union, such as engineering professionals, may have fewer resources to navigate through resolution processes. Like the intent of human rights legislation, our professional and workplace policies need to also include anti-discrimination policies and programs which proactively address subtle, individual inequities and embedded systemic inequities. Anti-discrimination measures include increasing public awareness, facilitating allyship skill-building, and holding leaders accountable for workplace culture through public reporting measures. The value of proactively addressing systemic inequities extends beyond mining or engineering and may benefit other workplaces looking to retain a representative workforce. The next cultural transformation needs to include non-government organizations, such as professional regulators, industry associations, and individual corporations, to collaboratively develop and proactively adopt anti-discrimination measures, which create an ecosystem where all people can advance in their careers without being hampered by discrimination.

4 Ally Activation Model: A Theory of Change

As discussed in the previous two chapters, workplace allies are needed to lead social transformations necessary to achieve a shift in workplace culture. The traditionally male-dominated workplace cultures of Saskatchewan’s mining industry and engineering profession are seeking to be inclusive and welcoming of all existing and potential future employees. However, as demonstrated in the previous two chapters, there is a gap between the current state — where discriminatory actions and systems are prevalent — and the intended future state — where workplaces are diverse, equitable, and inclusive. We argue that to create inclusive workplaces, those in positions of power (leaders) and those in majority groups can be engaged, trained, and supported to act as “active allies”. This chapter summarizes how workplace allyship is practiced across some male-dominated workplaces in Western Canada, including engineering and mining workplaces, and offers the Ally Activation Model as a change theory about how potential allies become activated.

In this chapter, I share insights into allyship practices that were gained through semi-structured interviews with seventeen participants identified as allies by their peers. Our interview questions were designed to understand participants' experiences with inequities in mining and engineering, and their EDI journeys to allyship. Our findings demonstrate that allies become activated when advancing past a “realization stage” on their own EDI journey and within a supportive ecosystem of an organization. Furthermore, we found that organizations can tap into a potential ally’s motivation and values by providing resources and opportunities to create ecosystems that support activating more allies. Additionally, organizations can engage equity champions — early adopters who are experienced and activated allies — to lead EDI change within their organizations.

In Phase 2 of the study, I led the request for ethics approval, the design of the methodology, participant recruitment, data collection, analysis, and reporting. Jovita Dias’ role on the project included co-interviewing participants, thematically analyzing transcripts, and writing sections of the Phase 2 report. The following manuscript, *Insights from equity, diversity, and inclusion allies: Results from the second phase of an interdisciplinary study on the retention of underrepresented people in mining*, was presented by me at the 2023 World Mining Congress conference in Brisbane, Australia and published with Jovita Dias as co-author as part of the conference proceedings.

4.1 Introduction

Employing a diverse and representative workforce is a challenge faced by many professions and industries in Canada. In particular, the mining industry and engineering profession are both traditionally male-dominated and have low representation of women and Indigenous peoples. Currently, women make up 16% of roles in the mining industry and 14% of the engineering profession despite comprising 50% of the population (Engineers Canada, 2020; Mining Industry Human Resources, 2018a). Furthermore, Indigenous people comprise 16% of the Saskatchewan population, yet only constitute 10% of the Saskatchewan mining industry, and less than 1% of the Canadian engineering profession (Saskatchewan Bureau of Statistics & Statistics Canada, 2016). A recent shift within the mining sector involves mining organizations and companies seeking to reflect the diverse communities in which they operate (Mining Association of Canada, 2020; Peltier-Huntley, 2019). Jocelyn Peltier-Huntley (2019) defines diversity as a measure of variety and notes it is a common indicator often used to measure employee demographics within an organization. Examples of employee demographic categories frequently used in Canada are gender, ethnicity, and sexual orientation. Underrepresented groups can help to fill projected labour gaps in mining and aid in solving challenges the industry faces. Such shifts are necessary because inclusive and diverse workplaces have been found to be more profitable, more innovative, and better places to work (BCG, 2018; Catalyst, 2016; Noland et al., 2016).

Many institutions have analysed current diversity challenges and have provided recommendations and potential solutions to advance inclusive workplaces (Mining Industry Human Resources, 2016; UN Women National Committee Australia, 2015; Women In Mining, 2010, 2017). Recommendations from these institutional studies can be grouped into five categories:

- Ensuring senior leadership-driven accountability,
- Training and programs to support and empower employees,
- Showcasing inclusive leadership actions, such as championing women,
- Ensuring company governance, and
- Increasing public awareness.

Despite the many recommendations, few studies highlight examples of successful implementation of inclusion and diversity strategies (Mining Industry Human Resources, 2018b; Wells et al., 2018). One potential strategy which touches on many of the recommendation categories is an allyship training program.

Allyship is a practice where those with privilege learn, reflect, and support those that have been historically marginalized (Brown, 2020; Carlson et al., 2019; Wilson et al., 2021). Importantly, allyship is not merely a title but involves taking action (Cabral, 2021; Carlson et al., 2019; Nixon, 2019). Allyship actions are needed to shift individuals to be inclusive and to shift systems to be more equitable. If inclusion were achieved, people would experience a sense of belonging in a psychologically safe environment free of inequities (Carter, 2021; Warren et al., 2022; WISEST, 2021). Allyship is not without its criticism and there are risks associated with allyship. A risk of allyship is that those with good intentions may not consult or consider those they aim to support in their efforts and instead cause harm (Carlson et al., 2019; Ihle, 2021; Peter, 2020). Another risk of allyship is adopting the “ally” title for a personal benefit which can result in performative rather than substantive actions (Peter, 2020; Radke, 2020). Motivating allyship behaviours with training tactics must then proceed with caution. We argue that to create inclusive workplaces those in positions of power (leaders) and those in majority groups can be engaged, trained, and supported to act as active allies. Those in leadership roles are best situated to act as allies because they hold the power to shift systems to be equitable and those in majority groups hold the power to shift workplace cultures to be inclusive. However, those in the majority have different experiences than that of historically marginalized people and may lack the awareness or understanding of the challenges faced by and allyship actions required to support underrepresented groups.

This study examines activating allies as one potential solution to advance equity, diversity, and inclusion (EDI) practices in mining and engineering. We seek to understand how communication strategies, including training and policies, can activate and support allies and aid in advancing the rate of change toward equity in mining and engineering. Equity can be defined as treating people fairly, according to their respective needs (Butler, 2013; DiFranza, 2019; Faraday, 2020; Pavlic et al., 2000) and requires a deep understanding of historical marginalization. This study seeks to learn from the experiences and best practices of individuals

who are acting as allies to advance EDI within their workplaces and communities. Our research questions for the study were:

- How has self-identity, including an understanding of power and privilege, shaped active allies' EDI journeys?
- How have their lived experiences inspired them to act in support of others?
- How can activated allies and organizations help activate additional workplace allies?

This paper shares our research design and methods (section 4.2), and results (section 4.3). Next, the implications for both individuals and organizations to advance along their EDI journeys (section 4.5) are discussed and concluded (section 4.6).

4.2 Research Design and Methods

4.2.1 Theoretical Framework

The theoretical framework for the study adopted an intersectional viewpoint which seeks to improve gender equity while incorporating intersectionality in the context of the Saskatchewan mining industry and the profession of engineering. Crenshaw (1989) theorized that racialized women may experience multiple forms of oppression based on their intersectional identities of gender and race. Furthermore, Collins (2009) describes intersectionality as:

an innovative and emerging field of study that provides a critical analytic lens to interrogate racial, ethnic, class, ability, age, sexuality, and gender disparities and to connect existing ways of looking at these structures of inequality, transforming knowledge as well as the social institutions in which they have found themselves (p. vii)

An intersectional viewpoint recognizes that there are multiple forms of inequity and oppression that individuals may experience based on different facets of their identities. Furthermore, if systems are shifted to meet the needs of the most marginalized then we can meet the needs of all people (Kim, 2021).

4.2.2 Methods

This study uses a participatory research approach between industry and researchers with the intent of combining experiences and best practices into transformative solutions to advance EDI within the Saskatchewan mining industry. This multi-phase study is interdisciplinary and explores disciplines such as rhetoric (communication), education, policy, and sociology.

Research methods for the study were approved by the University of Saskatchewan's Research Ethics board.

Participants were recruited through researcher Jocelyn Peltier-Huntley's academic committee and the IMII committee members. First, participants completed an online screening questionnaire on Survey Monkey that captured information about their self-identity, gender, profession, education, and connection to EDI. Next, researchers used the screening questionnaire responses to select a diverse group of seventeen (17) participants for virtual 1-hour interviews. As a primary selection criterion researchers selected participants with an interest in advancing social change related to gender equity and/or Indigenous engagement and reconciliation. As a secondary selection criterion, diversity across the identity spectrum and connection to the engineering profession or mining industry was used to select candidates.

Prior to being interviewed, participants consented to be openly acknowledged or remain anonymous. Interviews were conducted and recorded with Microsoft Teams to allow for transcription later. A series of semi-structured interview questions were designed to capture the competency, knowledge, and experiences of participants. Following the interview, participants reviewed and provided clarifications to their transcripts. After participant feedback, and edits to transcripts, researchers imported the transcripts to packaged software (NVivo, QSR International Pty Ltd, Victoria, Australia) for analysis.

Data analysis consisted of using NVivo to thematically code and analyse the transcripts using a qualitative critical rhetorical method, generative criticism. Generative criticism is offered by Foss (2004) as a method for digging deeper into artifacts and a means for researchers to answer specific questions about artifacts that catch their attention. The method for using generative criticism in this study included: 1) broadly coding the artifact; 2) formulating an explanation; and 3) detailed coding of the artifact (Foss, 2004). In this study, generative criticism was the primary method used and allowed researchers to look for common themes of experiences, behaviours, and knowledge between participants.

4.3 Results

Participant Demographics

Seventeen respondents participated in individual one-hour virtual (Microsoft Teams) interviews. As mentioned previously, participants either consented to public acknowledgement of their contribution or chose to remain anonymous. To protect the identity of anonymous

participants, demographic data has been aggregated and pseudonyms will be used to identify some participants. Participants consenting to be identified will be acknowledged with their names alongside any direct quotes in the study. Forty-one percent of participants (n = 7) identified as men and 59% (n = 10) identified as women. Most participants (53%, n = 9) identified their ethnicity as white, while the remainder identified as Indigenous (35%, n = 6) or Black (12%, n = 2). Participants either worked in industry (71%, n = 12) or academia (28%, n = 5). Participant classified their ages as 18-24 (n = 1), 25-34 (n = 2), 35-44 (n = 6), 45-54 (n = 7), or 55-64 (n = 1) years old. Additionally, two participants (12%) identified as part of the LBGTQ2IAS+ community.

4.3.1 Understanding Allyship

During the interviews, participants were asked a series of open-ended questions to determine their understanding of allyship and explore the behaviours, experiences, and shared worldviews around supporting and advocating for others. The thematic coding related to allyship behaviours will be discussed in this section.

Participants referred to allyship as engaging in *inclusive allyship behaviours* which benefit individuals who have been historically marginalized. One participant described allyship as necessary because “it definitely did become more apparent that my identity as a female in the industry was leading to different interactions and different experiences with my co-workers” (Avery). Participants described allyship as the “action” (Emily Bradshaw) of creating a *psychologically safe community* (n = 13) for all people and *advocating on behalf of others* (n = 12) or *elevating others* (n = 6). One participant commented,

allyship is about being a part of the solution, it’s about amplifying voices, and it’s about speaking for people who not necessarily don’t feel comfortable speaking, or amplifying those that do, and creating those safe spaces for people to bring their whole selves. (John Desjarlais)

A strategy to open conversations about EDI was described by some participants as finding “common ground”. Once “common ground” is established, participants can *shift perspectives* (n = 17) of others and encourage them to recognize their part in exhibiting inclusive behaviour. All participants described that they experienced their perspectives shifting through listening to examples and stories from others. One participant noted that allyship,

takes time, effort, energy and to do it well, make sure you hear the voices of those who belong to the designated groups, and what [they have] experienced. How [can you] either mitigate, [or] eliminate, any barrier that might exist so that they can bring their whole selves to an environment and that they can flourish? (Krys)

In addition to listening, participants offered other tactics they are using to *shift perspectives* and manage *disagreement* (n = 6). One direct tactic is to “call out” poor behaviour. One study participant described her motivation to speak up as,

feel[ing] like it’s my responsibility to have those tough conversations and to also take a stand to anything that’s not okay. I’m glad that I’ve come to the part in my life where I can do that and can say to a group of people, ‘That’s not right,’ (Kimberley Hanson)

Allyship can be reinforced through a thoughtful approach to difficult conversations. Participants described *empathy* (n = 6) and *respect* (n = 7) as being important while cautioning to *avoiding shaming* (n = 5) other people. One participant stressed the importance of

paying close attention because our intent is not to cause harm but to actually move forward in a really good and positive way. [To] advance EDI in a way that has actually heard the voices of those who may have been [negatively] affected in the past. (Krys)

Furthermore, participants use their influence to *create a safe community* (n = 13) for others and integrate *EDI into workplaces* (n = 7). A further discussion on the equity champions who embed EDI into organizations will be explored in section 4.4, Operationalizing EDI. Next, we will consider how allies may become activated.

4.3.2 The Journey From Awareness to Active Allyship

Participants were asked a series of questions about inequities they had faced to allow researchers to understand how they became aware of inequities in the workplace. The themes resulting from participants' experiences relevant to journeying from awareness to active allyship will be shared in this section.

4.3.3 Awareness of Identity

The participants (n = 17) were asked how they self-identify and how their acceptance has changed over time. All participants shared how they currently *understand their self-identity* (n =

17). Furthermore, nearly half of the participants commented how they now *accept* (n = 8) aspects of their identity that they previously felt they had to mask or hide. One participant, who identifies as disabled, Indigenous, and a woman, described her experience with masking as,

always this piece of trying to hide, these pieces of who I am, because the fear that this is going to negatively affect me. ... Because you're a single [parent] who's climbing out of poverty, you really rely on that paycheque, because you're always on that edge, but again, you can't tell anyone that either, because of the shame that you've come from poverty. (Lisa Mooney)

Indigenous people are rights holders in Canada and have experienced many inequities due to colonization. Indigenous participants relayed that in achieving acceptance of their identity they have also worked to *reclaim culture* (n = 4) lost through colonization. Examples of *reclaiming culture* included learning their Indigenous language, and cultural history or participating in cultural events. Importantly, participants recognized that in the spirit of reconciliation and with the acknowledgement of Indigenous people as rights holders' *Indigenous engagement* (n = 7) needs to be acknowledged separately or alongside EDI. Reconciliation efforts which overlap with advancing EDI could include *Indigenization* (n = 5) to incorporate Indigenous knowledge systems and ways of knowing and *community engagement and support* (n = 6).

Advancing and understanding EDI was recognized as being a journey without a final destination. Participants described their current *acceptance* (n = 8) of their self-identities as a *journey* (n = 9) happening over a period of time. One participant commented that "I've changed a lot myself, I'm not who I was, or even each role I've had" (Rob Jackson). Another participant who is a front-line supervisor in the mining industry described her journey as a "continuous process" which has involved "a ton of positive learning and unlearning and over time building my network of people" (Bai Bintou Kaira). Lastly, participants described *learning from others* (n = 17) and *self-guided learning* (n = 13) as important to advancing them on their allyship journeys.

4.3.4 Awareness of Inequity

All participants' awareness of inequity began with a series of events where they experienced or witnessed inequity. One participant described that they went "through quite a few

different stages” (Peyton). These inequities resulted in participants experiencing the impacts of *bias and stereotypes* (n = 16), *exclusion* (n = 15), or discriminatory behaviour such as *sexism* (n = 9) and *racism* (n = 8). In mining, inequities can also be entrenched in infrastructure, such as *washrooms and changerooms* (n = 7) which may not be safe and inclusive to all. Even participants who were not directly impacted by “harassment and bullying” recognized the impacts and “came to the realization that [they] wanted to make a difference” (Philippe Lepage). Participant’s experiences with inequities led to feelings of *being between two worlds* (n = 11), *frustration* (n = 7), *shame* (n = 5), and *tokenism* (n = 4). Participants who had one or more aspects of marginalized identity were more likely to express feelings of *frustration*, *shame*, and *tokenism*. A sense of *being between two worlds* was described due to a gap in the values which participants held and their experiences of not fitting into the environment. One participant described his experience of

liv[ing] in that mix between the two worlds, and it’s challenging, and I know why a lot of Métis struggle with their identity, because it’s hard to fit one way or the other way. [It all] comes down to confidence and just being understanding and truthful to yourself, in a way that’s just recognizing the complexities of identity in everybody. (Stryker Calvez)

These experiences with witnessing or experiencing inequity were essential to lead participants to search for solutions and advance on their journey towards allyship.

4.3.5 Realizing Moments

Realizing moments are critical events which encouraged participants to progress on their EDI journeys. The *realizing moments* were often combined with participants experiencing further *exclusion* (n = 5), *bias and stereotypes* (n = 2), or discriminatory behaviour such as *racism* (n = 3) and *sexism* (n = 1). Participants acknowledged that sometimes the full impact of the *realizing moments* was not fully *processed* (n = 13) until a later event. The *processing* of these *realizing moments* often occurred alongside support seeking, where participants were able to connect, reflect, and learn with others in a psychologically safe environment. *Processing* of the *realizing moments* most frequently occurred when participants were part of a *supporting group* (n = 5), a *training group* (n = 5), or as part of *therapy* (n = 2). One participant reflected that she struggled with learning on her own but an opportunity for mentorship and cultural support through the Saskatoon Tribal Council allowed her development to “really start to

amplify and ... everything just started to flourish” (Dawn Pratt). Another participant explained that her *processing* “always starts with self-awareness. People need to have a hard look in the mirror and have a good understanding of the humility teaching” (Peyton). Establishing situations for psychologically safe group interactions is thereby important to help people progress along their allyship journey.

4.3.6 Humble Steps Towards Allyship

During the interviews, participants *humbly* (n = 8) recognized how the *realizing moments* (n = 17) often marked a change in their beliefs and behaviours that inspired participants to then take action. Once allies are activated their actions support not only others in their workplaces, but also grow their knowledge. Participants engaged in *self-guided EDI learning* (n = 13) such as understanding their own *privilege* (n = 9) and *intersectionality* (n = 6), expanding their knowledge of *history* (n = 8), uncovering *unconscious bias* (n = 4), and understanding the importance of using *pronouns* (n = 8) and *gender-neutral titles* (n = 2) to create safety for others. In addition to growing knowledge, participants also applied their knowledge to improving skills in *communication* (n = 11), *anti-racism* (n = 2), and *building trusting relationships* (n = 10). Importantly participants acknowledged that being active allies also involves *making mistakes* (n = 9). One study participant noted that “allyship is knowing you’re going to be uncomfortable a lot because it’s going to challenge who you are and who you think you are” (John Desjarlais).

Importantly, participants’ allyship roles are supported within the organizations that they belong to. All seventeen (17) participants recognized *my role in EDI* and the *role their organization plays* in supporting allyship. Organizations’ role in supporting allyship is essential to dedicate resources to implementing EDI strategies, facilitating training, and supporting the forming of employee resource groups. While all participants described how they now engage in various allyship behaviours, described in the previous section, a distinct group of participants are also involved with *shifting systems* (n = 15) within their organizations. The equity champions who partake in *shifting systems* are both acting as positive role models of inclusive behaviours and are helping to create environments which support equitable workplaces. One participant described that *shifting systems* is about “getting at the systems and structures, the way I always talk about it is how do we embed EDII³ in our systems, structures, and conversations” (May). In

³ EDII – equity, diversity, inclusion, and Indigeneity

many cases, equity champions are change agents within organizations and are also members of underrepresented groups.

Participants have experienced moving through phases of *awareness*, *realizing moments*, *acceptance*, and *allyship*. Participants' experiences with and exposure to inequities led to *realizing moments* and have, in part, influenced them to be active allies. Some allies have advanced to equity champions, in part due to the positions they hold in organizations and are involved with *shifting systems* to benefit others. The next section will discuss tangible examples of how allies and champions are operationalizing EDI in their organizations.

4.4 Operationalizing EDI

Operationalizing EDI involves understanding challenges faced by underrepresented groups and embedding equitable solutions into organizational processes and systems. Solutions can be deeply relational and ongoing, such as reconciliation, or can be more transactional in nature, such as *training* or *hiring*. The themes resulting from participants' experiences relevant to operationalizing EDI are discussed in this section.

Mining employees are not currently reflective of the provincial make-up of its citizenry; front-line staff, site supervisors and leadership need to recognize this problem. *Measuring progress* (n = 5) and using *targets and data* (n = 6) can support increasing representation and identifying inequitable systems. Some organizations have intentionally included metrics to measure their *hiring practice* (n = 8) success making it tangible proof for their employees to see the organization's accountability towards EDI. Some participants were concerned about past hiring practices and dubbed them as "buddy-system", "diversity hires", or "tokenism". Changing behaviours and habits is challenging and the transition is time-consuming, but participants agreed that organizations are moving from using the language of compliance to that of commitment.

During the interviews, several participants highlighted the importance of employee *training* (n = 11) and emphasized the *participation of leaders in EDI* (n = 10) activities. Participants approved that social groups forming whether *formally* (n = 9) or *informally* (n = 6) were avenues for social cohesion and like-mindedness, but particularly it provided the necessary conditions to advocate for change around EDI work. Some participants preferred formalizing of employee resources groups around EDI work while others preferred the organic meaningful one-on-one relationship building or *networking* (n = 5). A participant claimed that

education, engagement, empowerment, and elevating champions is sort of, our approach to doing all this [EDI work]. (May)

The interviews indicated that most participants believed that EDI is not a quick process, and you need champions to take on the work. But that this work of *operationalizing EDI* (n = 11) requires engagement from both top-down and bottom-up to move it forward and create a culture of change within a workplace. Some organizations have formal positions for equity champions that have the responsibility of developing EDI strategies and implementing processes in business units. Networking and influencing play a major role in getting people involved in EDI programs and initiatives in the workplace.

4.5 Discussion

Insights gained on diversity, inclusion, and equity practices from industry and academia have allowed researchers to create an allyship framework, the Equity Ally Activation Model, shown in Figure 4-1. The Equity Ally Activation model contributes to answering our research questions. First, being able to accept one's self-identity, including an understanding of power and privilege, was an important *realizing* step on the participant's EDI journey. Next, lived experiences of inequities allowed participants with marginalized identities to adopt allyship practices; however, those who witnessed or were exposed to inequities indirectly were also able to adopt allyship practices in support of others. Finally, the model aids in answering the research question: *How can communication strategies, including training and policies, activate and support equity allies and aid with advancing the rate of change toward gender equity in mining and engineering?* The model synthesizes participants' experiences and feelings in moving along a potentially continuous path from unawareness to leading change – where one practices allyship. In understanding the role that both individuals and organizations play in advancing EDI researchers can develop interventions at key phases to ensure the successful continuity along an individual's EDI journey.



Figure 4-1: Equity Ally Activation model

By following the Equity Ally Activation Model, individuals and organizations can proceed on their EDI journey. The model assumes that people generally start in a state of unawareness and through exposure to inequities begin to progress through the model. In the *awareness* stage participants became aware of inequities to themselves or others. If participants have a marginalized aspect of their identity, they are likely to first proceed through the model based on this aspect of their identity. In the *support seeking* stage people will question and seek to understand their experiences with inequity. In the *realizing* stage participants will experience a series of events which are marked by processing past experiences, skills growth, finding community, and acceptance over the inequities they have witnessed or experienced. Lastly, in the *leading change* stage allies are skilled and motivated to practice inclusion and work to shift the perspectives of others. Further, equity champions sought out roles to expand their impact and shift systems.

Understanding how participants felt and act in each phase of the Equity Ally Activation Model is important, because we can use this information to ensure appropriate support for individuals who experience inequities. Providing support can positively impact retention. In the *awareness* stage, participants felt excluded, frustrated, shamed or like they were between two worlds. As a result, they did not always speak up when witnessing or experiencing inequity. Next, participants felt confused in the *support seeking* stage as they navigated potential shifts in their perception of the psychological safety of their environment. Depending on the available support structure and their own capacity, participants may seek to exit organizations at this stage.

Therefore, a supportive EDI ecosystem in an organization is important for retention. Next, participants experienced a series of *realizing* moments where they sought out community to learn about EDI, bias, truth and reconciliation, and privilege. During the *realizing* stage, participants felt supported by others and gained a greater acceptance of their self-identity. Finally, in the *leading change* stage active allies, allies are humbled at the complexity of social challenges and may progress through the model repeatedly as they learn more about other identity groups.

Lastly, Equity Ally Activation Model can be used to plan interventions, such as allyship training. Allyship training can lead to the attainment of knowledge and the development of skills and behaviours required of an active ally. As was described by all participants, learning, and applying EDI knowledge is best done when learners are *learning from other people* (n = 17). As such, training material should incorporate a diversity of perspectives and experiences in the mining industry and engineering profession. In the *awareness* stage allies should develop bystander intervention skills to support speaking up for themselves and others. In the *support seeking* stage allies will develop comfort in using EDI terminology and supporting and listening to those who have experienced inequities. Many researchers and activists have also reflected on the critical importance for allies to practice learning, unlearning, and self-reflection (Brown, 2020; Cabral, 2021; Carlson et al., 2019; Larry & Jason, 2020). As a result, training in the *realizing* stage should demonstrate how to continue self-guided learning and the importance of self-reflection. Participants in our study and many other studies have also emphasized the importance of learning from and with others in a psychologically safe environment (Cabral, 2021; De Souza & Schmader, 2022; Wilson et al., 2021). We propose that EDI interventions can use a combination of self-guided asynchronous and interactive synchronous learning opportunities to create a psychologically safe environment and allow opportunities for learning and interacting with other learners. Importantly, an EDI journey was acknowledged by participants in our study as one which does not have a final destination. As such, EDI learning opportunities and interventions need to be embedded in organizations, thereby creating an ecosystem that supports ongoing psychological safety and allyship activation.

4.6 Conclusion

This study aims to advance equity in the context of the engineering profession and the Saskatchewan mining and minerals industry; however, findings from this study are applicable to any individual or organization looking to advance along their EDI journey. Participant's shared

practical examples of how to shift perspectives and change systems through communication, education, and support programs. The key insights gained from participants on diversity, inclusion and equity are:

1. Allies can be activated when advancing past a “realization stage” on their EDI journey and within a supportive ecosystem of an organization.
2. Organizations can tap into a potential ally’s motivation and values by providing resources and opportunities to create ecosystems that support activating more allies.
3. Equity champions are experienced and activated allies who are inherently driven and can be resourced to lead EDI change within their organizations.

The significance of this study was to better understand what motivates individuals to become active allies, what allies are doing in practice to implement changes to improve diversity, inclusion, and equity and how allies define themselves in their roles to support others. Additionally, the study’s findings help to fill in gaps in the literature on the applications of EDI recommendations and how they are operationalized in the workplace, particularly at mining sites. Lastly, outcomes from this study will inform the development of interventions to be piloted in the next phase of the study in 2022 in the College of Engineering at the University of Saskatchewan.

5 Active Allies Course Development & Engineering Pilot

The novel Ally Activation Model theorized in the previous chapter informed the creation of an EDI training program and allyship interventions, known as the Active Allies course. In this chapter, we share the design and results from testing the training program with participants in the Engineering College at the University of Saskatchewan to adopt a practice of inclusion. The traditionally male-dominated engineering industry needs to be inclusive to achieve proportional representation and solve complex global challenges. To foster inclusive engineering practices, individuals, including leaders and those in the majority, can be engaged, trained, and empowered to serve as “active allies”. Findings from the Active Allies course pilot study show learners’ motivation and allyship competencies progressed because of the course. However, conducting EDI training without an organizational equity, diversity, and inclusion commitment poses a potential risk to sustained allyship behaviours. With appropriate organizational support, our findings show that allyship training for engineers holds the potential to promote inclusive behaviours necessary to create equitable and diverse workplaces, necessary to solve complex global problems.

In Phase 3 of the study, Jocelyn led the request for ethics approval, the design of the methodology, content creation, participant recruitment, facilitating all discussion groups, data collection, analysis, and reporting. Dr. Moazed’s role on the project included co-writing the Active Allies scripts and course content, co-teaching in the Active Allies course videos, reviewing the course content in the learning management system, reviewing the ethics application, and editing the Phase 3 report. The following manuscript, *Disrupting the status quo: Fostering a practice of inclusion in engineering through post-secondary allyship training*, is co-authored with Dr. Moazed and was submitted to Facets, an interdisciplinary Canadian STEM journal, in March 2024.

5.1 Introduction

5.1.1 EDI is Needed in Engineering

An engineering profession which serves the needs of diverse communities is necessary to foster innovations required to solve complex global problems (EGBC, 2022; Hirsch et al., 2023; Ormand et al., 2022). However, engaging and retaining a diverse and representative workforce persists as a challenge in the engineering profession (APEGA, 2021; Hall et al., 2022; Howard, 2022). In particular, the Canadian engineering profession has a low representation of women and

Indigenous peoples; women make up 14% of the Canadian engineering profession and Indigenous peoples are less than 1% (Engineers Canada, 2019b, 2023). Many studies have been done to understand the reasons why, in Western cultures, there are not more women in engineering, with culture being one of the most cited concerns (Fouad et al., 2017; Howard, 2022; Wells et al., 2018). Furthermore, studies show the negative impacts of engineering culture start as early as undergraduate education (Anderson, 2002; Canadian Federation of Engineering Students, 2018; Dennehy & Dasgupta, 2017). In recognition of these disparities, Canadian engineering regulators, industry associations, and employers, are increasingly making equity, diversity, and inclusion (EDI) commitments to better reflect the diverse communities in which they operate and serve (EGBC, 2022; Mining Association of Canada, 2020; Peltier-Huntley, 2019).

Equity, diversity, and inclusion (EDI) are frequently merged, but each term has a distinct meaning. Understanding diversity requires contextual knowledge of time, place, and relationships (Janssens & Steyaert, 2019; Villesèche et al., 2018). Diversity, in the Canadian context, refers to assessing a variety of demographics categories to achieve proportional representation; these categories include gender, race/ethnicity, disability, and sexual orientation. Achieving proportional representation would mean professions and institutions reflect local population ratios. Furthermore, underrepresented individuals, and those at the intersections of marginalized groups face additional barriers which poses a challenge for the profession to achieve proportional representation (Engineers Canada, 2019a).

To retain underrepresented groups in engineering, institutions must shift from the status quo and foster inclusivity. This shift is vital because diverse and inclusive organizations yield greater innovation and satisfaction which may lead to better retention of underrepresented groups (Catalyst, 2016; Noland et al., 2016). Inclusion is crucial to a person's psychological health, that is, ensuring awareness of one's abilities, coping with stress, being productive, and contributing to one's community (World Health Organization, 2005, p. 2). Furthermore, in a psychologically safe environment, harm or threat is absent to individuals (Canadian Standards Association & Bureau de normalisation du Quebec, 2013b). Therefore, we define inclusion as requiring a sense of belonging and experiencing psychological safety to be one's authentic self (Carter, 2021; Peltier-Huntley, 2019; Warren et al., 2022; WISEST, 2021).

Lastly, the concept of equity goes beyond interpersonal connections, expanding the scope to society's systems and structures (Butler, 2013; Onyeador et al., 2021). Equity can be defined as treating people fairly, according to their respective needs (Pavlic et al., 2000) and requires a deep understanding of historical marginalization. Therefore, to advance diversity in engineering, we need to combat individual bias with inclusion and systemic bias with equity measures. One potential intervention to support inclusive practices is an allyship training program, which can be incorporated in post-secondary education to equip a diverse engineering profession.

5.1.2 Allyship Overview

Haine-Bennett et al. (2020) argue that “allyship is a way to influence culture in the workplace and consists of building relationships based on trust, consistency, and accountability with marginalized individuals and (or) groups” (p. 230)(p. 230). Importantly, allyship is not merely a title but involves taking action (Cabral, 2021; Carlson et al., 2019; Nixon, 2019). There is increasing recognition that allyship actions are needed to shift engineering professionals to be inclusive and to shift systems to be more equitable (Haine-Bennett et al., 2020; Nash et al., 2021; Radke, 2020; Warren & Warren, 2021; Wilson et al., 2021). If inclusion were achieved, individuals would experience and contribute to a sense of belonging in a psychologically safe environment free of inequities (Boon, 2022; Warren et al., 2022; WISEST, 2021). Allyship which Forscher et al. (2017) argues is established as a practice rather than as an occasional action may contribute to disrupting everyday instances of bias and allow for a sustained cultural shift in the profession. Additionally, Haine-Bennett et al. (2020) ascertain that workplace cultural interventions need to consider individuals' behaviours, interpersonal relationships, and proactive institutional policies. Therefore, we define allyship as a practice of inclusion where — through listening, learning, and reflection on personal experiences and privileges — people actively support historically marginalized persons and communities in achieving their full potential (Brown, 2020; Carlson et al., 2019; Forscher et al., 2017; Wilson et al., 2021).

Criticism of allyship arises from the risk that well-intentioned actions may cause harm without consultation with those being supported (Carlson et al., 2019; Ihle, 2021; Peter, 2020). It is particularly important for engineers to engage with the people they aim to support in their practice, i.e. the end users of their designs (Boon, 2022; Hirsch et al., 2023). Another allyship risk is adopting the "ally" title for personal gain, leading to performative actions rather than substantive support (Peter, 2020; Radke, 2020). Warren and Warren (2021) argue that aligning

allyship with personal values may sustain allyship behaviors beyond a training course. With caution, we assert that training can motivate allyship and argue that leaders, who possess the power to influence, can be trained to act as active allies who can shape equity in systems and foster inclusive culture (Peltier-Huntley, 2023).

5.1.3 Active Allies Course

In this study, we developed an allyship training course and engaged 26 participants from the University of Saskatchewan's College of Engineering. Our objective was to understand how communication strategies, including training and policies, can activate and support allies to advance EDI within the Canadian engineering profession. In line with William and Sharif's (2021) study on allyship, we asked how we could support potential allies to establish an ongoing practice which fosters EDI in the engineering profession. In this paper, we share our research design, methods, and results in designing and trialing an allyship training intervention — one potential solution to advance EDI — in a Canadian engineering college. Additionally, in the discussion section, we offer insights for individuals and organizations to advance EDI.

The learning objectives for the course constructively aligned with the Ally Activation change model, described in the next section. The course allowed learners to asynchronously progress through eight online modules over four weeks. Each module includes a 7 to 20-minute-long video created by the researchers. Individuals appearing in the videos included the two researchers, the Dean of the host college, and eight allies who had participated in a previous phase of the project. In line with the *Employment Equity Act* (Canada, 2023), the course broadly encouraged allyship across five equity-deserving identity groups: women, Indigenous people, visible minorities, persons with disabilities, and members of the 2SLGBTBQ+ community. These five groups are thought to be underrepresented and marginalized in Canada's engineering profession, although data to verify underrepresentation is limited for some groups. To reinforce concepts learned in the online modules, participants also completed self-reflection exercises, end-of-module quizzes, and participated in weekly group discussions.

5.2 Methods

5.2.1 Theoretical Framework

The Ally Activation Model, shown in Figure 5-1, theorizes that individuals move along a potentially continuous path from unawareness to leading change — where one practices allyship

(Peltier-Huntley & Dias, 2023). This theory of change informs both individual and organizational interventions which may foster and support EDI advancement.



Figure 5-1: Ally Activation Model (Peltier-Huntley & Dias, 2023)

By following the Ally Activation Model, individuals and organizations can advance on their EDI journey (Peltier-Huntley & Dias, 2023). The model assumes that people start in a state of unawareness and through exposure to inequities begin to progress through the model. In the *awareness* stage, participants became aware of inequities to themselves or others. If participants have a marginalized aspect of their identity, they are likely to first proceed through the model based on this aspect of their identity. In the *support-seeking* stage, people will question and seek to understand their experiences with inequity with others. In the *realizing* stage, participants will experience a series of events which are marked by processing past experiences with inequity, developing allyship skills, finding a community of fellow allies, and gaining acceptance over the inequities they have witnessed or experienced. Lastly, in the *leading change* stage, allies are skilled and motivated to practice inclusion and may work to shift the perspectives of others. Further, equity champions are frequently early adopters of allyship, which may be leading EDI change efforts which expand their impact and are working to shift systems.

5.2.2 Methods

This study uses a participatory research approach between industry and researchers with the intent of combining experiences and practices into transformative solutions to advance EDI within the engineering profession. The study is interdisciplinary and uses methods from disciplines such as rhetoric, education, policy, and sociology. Research methods for the study were approved by the University of Saskatchewan’s Research Ethics Board.

As suggested by Fadeyi et al. (2020), we engaged a broad group of participants in the college including faculty, staff, and students. Researchers identified potential participants following their completion of an online screening questionnaire where we learned about participants' self-identity, gender, profession, education, and connection to EDI. Next, all 28 participants who completed the recruitment questionnaire were invited to complete a pre-assessment questionnaire. The pre-assessment questionnaire helped us understand participants' baseline knowledge, motivation, and competencies related to allyship. Following completion of the pre-assessment and confirmation of consent, participants were added to the online course site and placed in discussion groups with up to six participants based on their availability. Two participants did not finish the course due to personal reasons.

Up to six weeks following the completion of the course, 26 participants completed a post-assessment questionnaire. Like the pre-assessment, the post-assessment questionnaire allowed us to understand participants' knowledge, motivation, and competencies related to allyship, sought feedback on the course, and allowed participants to share their continuous learning action plans.

Text-based artifacts, including group discussion notes, quiz responses, and questionnaire responses were imported to packaged software (NVivo, QSR International Pty Ltd, Victoria, Australia) for qualitative analysis. Qualitative data analysis consisted of using NVivo to thematically code and analyze written responses using a critical rhetorical method, generative criticism. Generative criticism is a method for digging deeper into artifacts and allows researchers to answer specific questions about artifacts that catch their attention (Foss, 2004). The method for using generative criticism in this study included: 1) broadly coding the artifact; 2) formulating an explanation; and 3) detailed coding of the artifact (Foss, 2004). In this study, generative criticism allowed us to identify common themes across participants' responses.

Quantitative survey questions were analyzed with SPSS statistical software (IBM, Armonk, NY). Five-point Likert questions were summarized by the mean response of participants in the pre-assessment and post-assessment questionnaires. After checking for normality, a Wilcoxon signed-rank test — a non-parametric version of a paired t-test — was selected to check for significant differences between pre-and post-assessment responses.

5.3 Results

5.3.1 Participant Demographics

Of the 26 participants who participated in the Active Allies pilot course, 42% identified as professional engineers, 15% were working towards their professional designation, 19% were engineering students, and 23% had non-engineering backgrounds. Additionally, 65% were staff or faculty and 35% were graduate or undergraduate students. 50% of participants identified as women, 46% as men, and 4% as non-binary. Furthermore, 54% of participants identified as white and 46% identified as visible minorities; no participants identified as Indigenous. Lastly, 15% of participants identified as 2SLGBTQ+ and 12% identified as disabled persons. In total three people identified as having no marginalized identities (i.e., cis-gendered, straight, white, and able-bodied males) while the remaining 23 participants were part of at least one marginalized group and at least seven people were part of two or more marginalized groups.

Thematic analysis revealed that participants were drawn to participate in the course for several reasons; the most common being to increase their EDI knowledge (n = 16, 62%), to help change their workplace or the engineering profession (n = 13, 50%), to better understand their role as an ally (n = 12, 46%), and to expand their allyship skills (n = 8, 31%).

5.3.2 Understanding the Organizational Ecosystem

Organizations have a significant role to play in supporting allyship efforts as part of a broader EDI strategy (Peltier-Huntley & Dias, 2023). Before (pre-assessment) and after (post-assessment) the course participants were asked to reflect on ongoing EDI efforts in the college and the frequency of discussions around EDI they participated in as members of the college.

Participants rated the diversity in the college as *little to moderate amount*. There was no notable change in this rating between the pre- and post-assessment (mean response of 2.9 on a five-point Likert scale). One participant commented that there appears to be ‘more ethnic diversity in faculty and grad students, more women in staff roles than faculty roles, undergraduate students are likely the least diverse and most likely to be Canadian.’ Another participant recognized that there have ‘been improvements, especially for 2SLGBTQ+ people’. The predominant themes found using generative criticism were that 77% (n = 20) of participants believed there was a high degree of racial/ethnic diversity in the college and 50% (n = 13) of participants believed there are lower levels of gender, Indigenous, and 2SLGBTQ+ diversity.

Despite a lack of available diversity data, 31% of participants either believed that diversity was improving (n = 8) or that representation gaps were persisting (n = 8).

Conversations about EDI increased because of the course. Before the training, participants identified they were discussing EDI in the college an average of a few times per month. Following the course, participants indicated discussing EDI an average of at least once per week and were having more frequent EDI conversations with their peers (n = 8). Following the course, these conversations expanded to participants' personal connections (n = 4), and with their families (n = 4).

Thematic analysis revealed that some participants felt that while they had grown through the course, they felt that the organization they were a part of had not. While the host university was in the process of defining its EDI strategy, it had not been communicated to participants during the study. Seventy-seven percent (n = 20) of participants indicated their awareness around EDI increased because of the Active Allies course; however, their perception of the importance of EDI to their organization decreased slightly between the pre-and post-assessment questionnaires. The decreases in organizational perception were evident in participants' ranking of the value participants felt in the college's EDI initiatives, and participants' confidence in discussing EDI in the college decreased. Participants wanted to see a clear commitment from the university and college to advance EDI.

5.3.3 Awareness

In the awareness stage of the Ally Activation model, potential allies need to be aware of inequities faced by marginalized groups, such as bias, discrimination, harassment, and microaggressions. Furthermore, allies at this stage in their development can behave as active bystanders, which is a type of reactive allyship; bystanders speak up in the moment and informally raise a complaint to disrupt instances of inequity.

Participants' awareness of challenges faced by equity-deserving groups over others increased slightly between the pre-and post-assessment questionnaires, as shown in Figure 5-2; the change in this belief due to the course was not statistically significant for four of the five equity-deserving groups. A Wilcoxon signed-rank test indicated that participants' belief that 2SLGBTQ+ people experience challenges in the workplace increased significantly between the pre-and post-assessment ($Z = -2.97, p = 0.003$). In analyzing the disaggregated demographic data, we found male participants' belief that women face challenges in the workplace increased

by an average of 0.42 on a five-point Likert scale compared to a 0.15 increase for women; white people's belief in challenges faced by visible minorities increased by 0.29 compared to 0.33 for those belonging to visible minorities; abled-bodied participants' belief that disabled persons face challenges in workplaces increased by 0.43 compared to no change in disabled persons' beliefs; and cis-gendered straight participants' believe that members of the 2SLGBTQ+ community face challenges in the workplace increased by an average of 0.59 compared to no change in the beliefs of those belonging to the 2SLGBTQ+ community. In summary, participants' belief that people different than them experience challenges in the workplace increased because of the course.

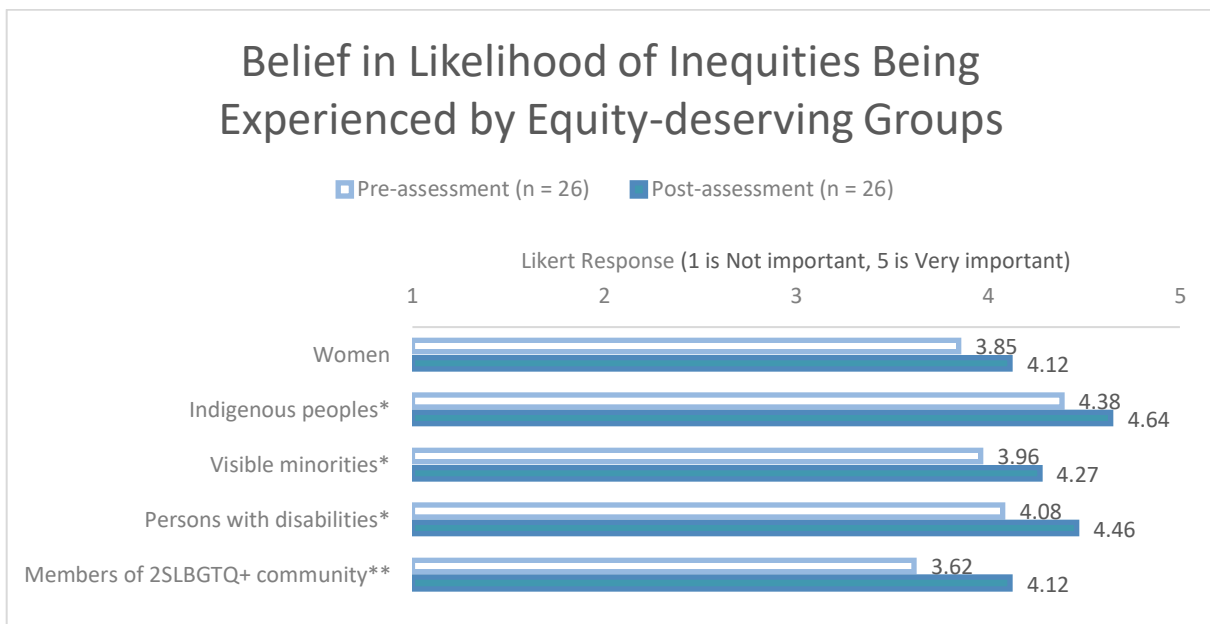


Figure 5-2: Belief in the Likelihood of Inequity Being Experienced by Five Equity-Deserving Groups

Participants' understanding of forms of inequities increased significantly between the pre- and post-assessment questionnaires, as is shown in Figure 5-3. The increases in understanding of bias ($Z = -3.05, p < 0.005$), discrimination ($Z = -3.63, p < 0.005$), harassment ($Z = -2.74, p = 0.006$), and microaggressions ($Z = -3.58, p < 0.005$) were found to be statistically significant using a Wilcoxon signed-rank test. In a group reflective exercise after completing the first two modules, participants noted that societal and individual awareness of social challenges had both shifted in the past few years. Those who were newcomers to Canada recognized the differences

and similarities of the impacts of colonization from their home countries despite the learning curve they experienced to understand Canadian history and societal norms. Lastly, while some participants noted they already had some knowledge of EDI concepts, others were surprised at the breadth of issues related to EDI.

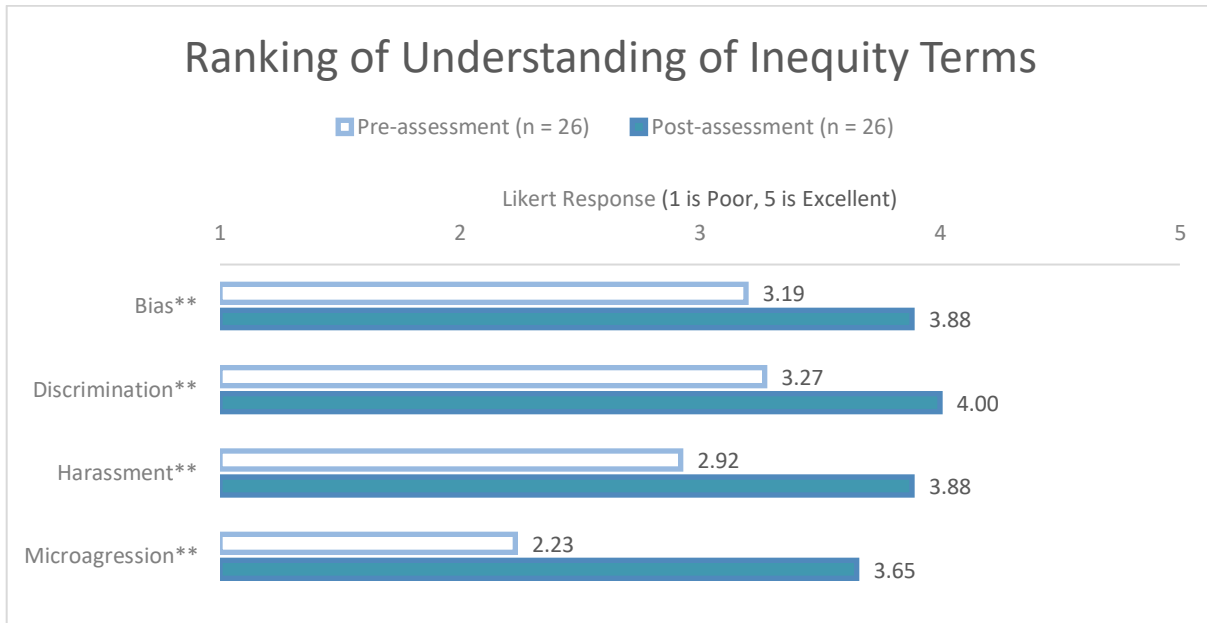


Figure 5-3: Ranking of Understanding of Inequity Terms

Lastly, participants' intentions to act as bystanders by speaking up or intervening in the moment increased because of the Active Allies course, as is shown in Figure 5-4. A Wilcoxon signed-rank test indicated a significant increase in participants' likelihood to speak up if they witnessed ($Z = -2.13, p = 0.03$) or were confided in about the incident ($Z = -2.07, p = 0.04$). Participants indicated being less likely to speak up if they were the victim of discrimination or harassment; however, the likelihood for participants to speak up if they were the victim increased for those with at least one aspect of their identity being marginalized by an average of 0.41, while the likelihood for participants with at least two marginalized aspects of identity increased by an average of 0.33 between the pre-and post-assessment. Additionally, in describing the role and responsibilities of allies, 73% of participants see their role as being active bystanders ($n = 19$). Participants credited their increase in intention to speak up when experiencing or witnessing an incident was due to learning and practicing the bystander intervention model, DIGGER — an acronym for direct action, indirect action, get a co-worker, get an authority, engage the target, and record and report — developed by Mine Shift (2024).

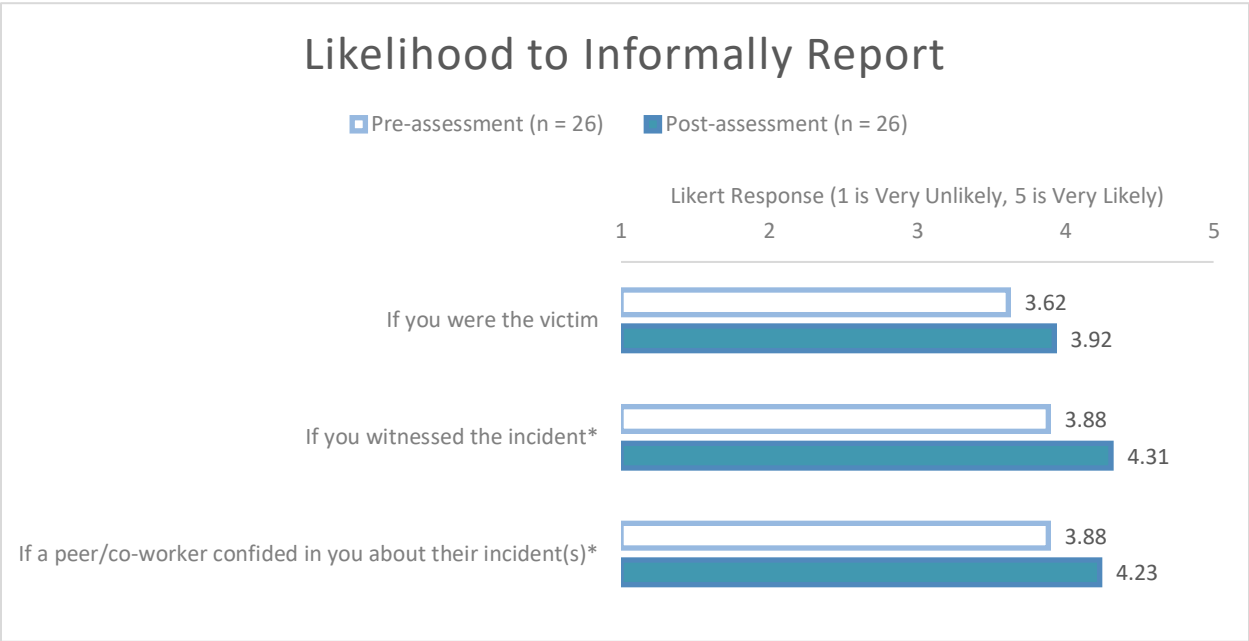


Figure 5-4: Likelihood of Informally Reporting

As a result of the Active Allies course, participants increased their knowledge of various forms of inequities, the challenges faced by five equity-deserving groups, the awareness to recognize these incidents, and the likelihood of acting as active bystanders when witnessing or experiencing inequity.

5.3.4 Support Seeking

In the support-seeking stage potential allies need to understand the three primary EDI terms and intersectionality to practice active listening, gain confidence in discussing inequities, and be able to formally report inequities. Using a five-point Likert scale, participants were asked to rate their understanding of foundational EDI terms. As is shown in Figure 5-5, before taking the training participants most understood the term *diversity* and least understood the term *intersectionality*. Following the training participants' understanding of all four of these terms improved. As was found with a Wilcoxon signed-rank test the improvement in the understanding of diversity ($Z = -1.99, p = 0.05$), inclusion ($Z = -3.35, p = 0.001$), equity ($Z = -3.70, p < 0.001$), and intersectionality ($Z = -3.69, p < 0.001$) were all statistically significant.

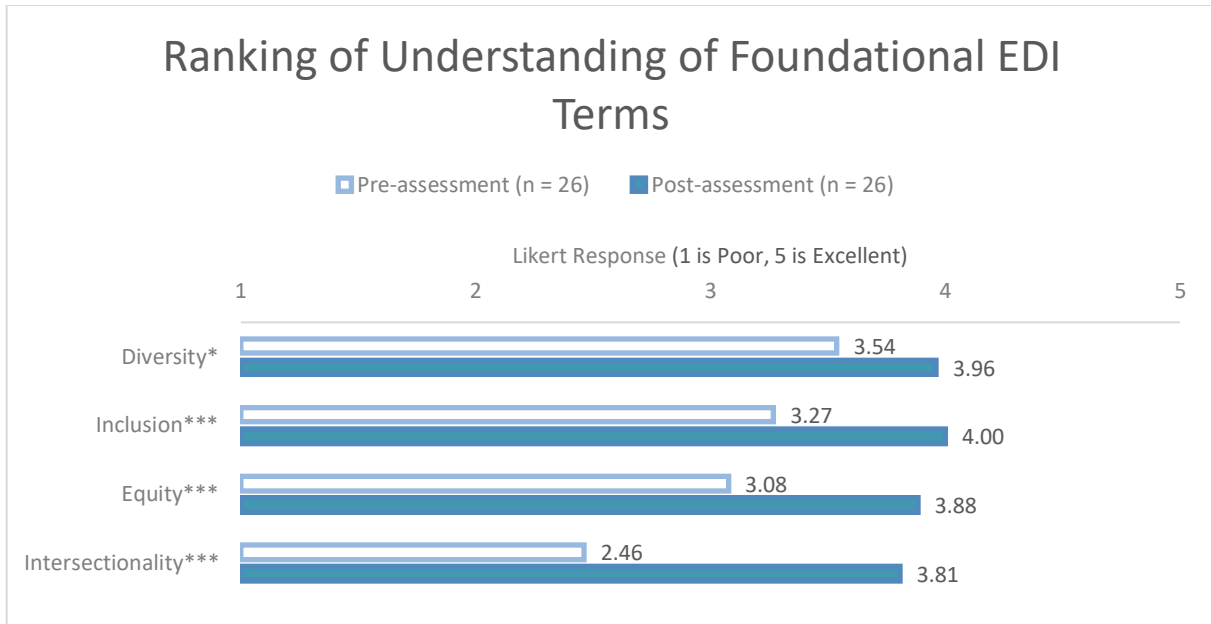


Figure 5-5: Understanding of Primary EDI Terms

Throughout the group discussions, participants were encouraged and prompted to practice active listening. Additionally, participants had the option of completing a self-reflection exercise on active and compassionate listening. In the self-reflection exercise — based on recommendations from Stuart (2021) — participants were guided to consider how they would respond to someone who disclosed experiencing inequity, such as discrimination or harassment. Additionally, participants were prompted in the exercise to explore compassionate listening and strategic questioning as communication tools for shifting the mindsets of those who may not be aware of or support EDI (Arbor, 2011; Peavey, n.d.). In the final group discussion and on the final module quiz, 35% of participants (n = 9) indicated the main skill they were planning to practice as part of their continuous learning efforts was active listening. Additionally, thematic analysis of the post-assessment questionnaire revealed the most common inclusive action participants were planning to practice was active listening (n = 10), followed by using inclusive language (n = 9), sharing power (n = 7), and accommodating difference (n = 5); these are all supportive allyship actions.

Potential allies need to have confidence in discussing workplace challenges faced by equity-deserving groups. As shown in Figure 5-6, participants had the highest confidence — both before and after the training — in discussing challenges faced by women. The increase in

confidence to discuss challenges faced by women is likely due to the higher percentage of participants that were women. Additionally, the confidence in discussing challenges faced by the four other equity-deserving groups increased throughout the course. The most significant improvements were in support of challenges due to ethnicity in support of Indigenous peoples ($Z = -1.88, p = 0.06$) and visible minorities ($Z = -1.93, p = 0.05$). Furthermore, the thematic analysis revealed 69% ($n = 18$) of participants indicated having more candid conversations about bias, discrimination, and harassment with friends and family following the training.

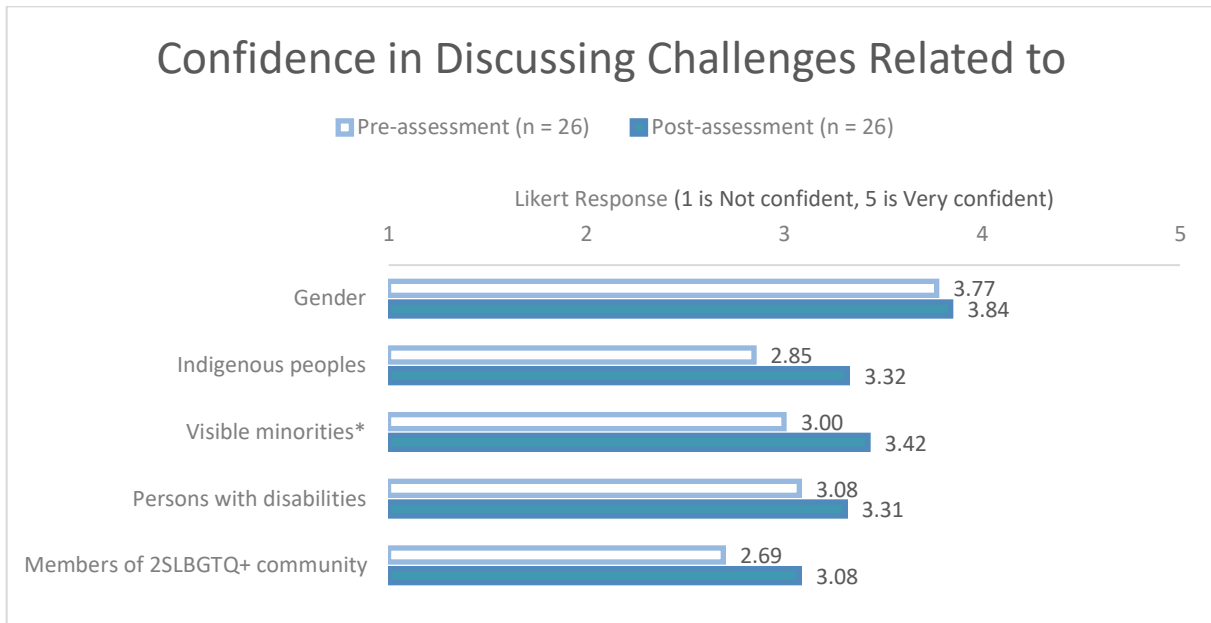


Figure 5-6: Confidence in Discussing Challenges Faced by Equity-Deserving Groups

Lastly, in the support-seeking stage, potential allies may need to raise formal complaints related to discrimination and harassment in the workplace. Participants' knowledge of how to formally report a discrimination or harassment incident increased significantly because of the Active Allies course ($Z = -2.87, p = 0.004$). As is shown in Figure 5-7, participants indicated an increased likelihood to formally report an incident if a peer or co-worker confided in them; however, the intention to formally complain did not significantly increase for scenarios where participants were the victims or had witnessed the incident. As discussed previously, participants indicated they were more likely to informally intervene, by speaking up in the moment, which may explain the minimal change in intent to formally report witnessed incidents. One participant noted, “the course helped make me feel more responsible about it, even if I was not in an

authority role.” Participants were asked to reflect on instances of discrimination and harassment they had witnessed or experienced in their workplaces during the course and in the pre- and post-assessment questionnaires. As a result of the training, slightly more participants were able to recall a discrimination and harassment incident following the training. Additionally, participants described how the course gave them language and an understanding of inequity which allowed them to recognize their experiences were not rare occurrences. Furthermore, participants now recognize power imbalances in professional relationships which may contribute to the lack of reporting and speaking up following discrimination and harassment incidents. Additionally, another participant reflected, “I now understand that this incident is not an isolated event, and this type of discrimination happens every day.”

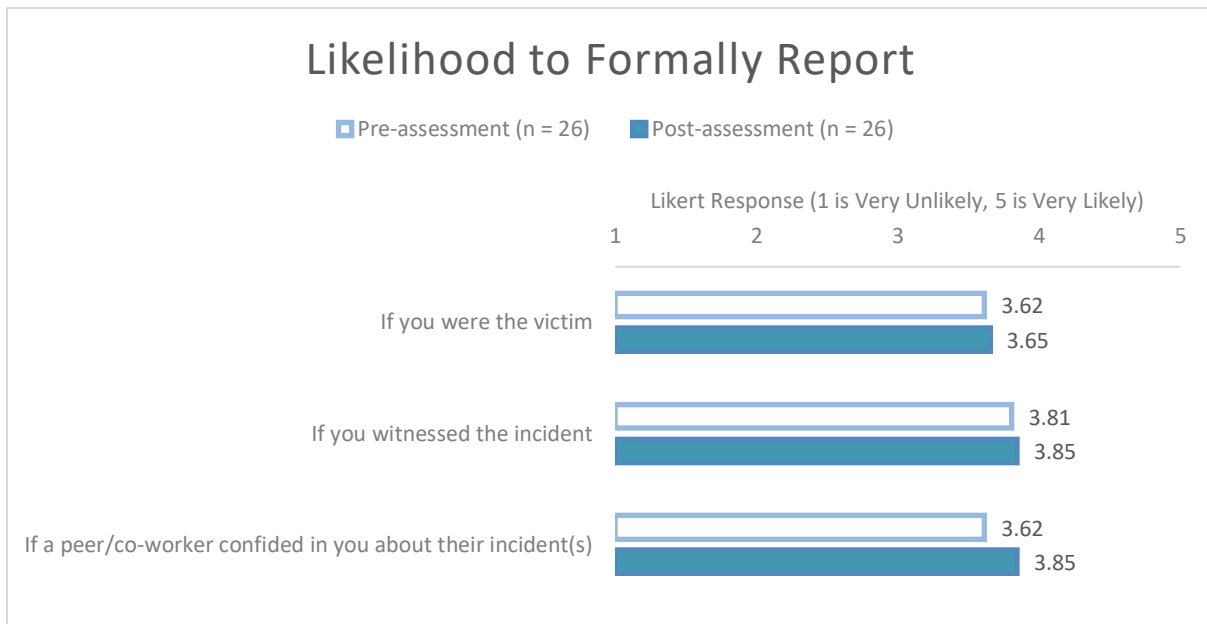


Figure 5-7: Likelihood to Formally Reporting

5.3.5 Realizing

As potential allies move to the realizing stage, they need to understand the more nuanced or secondary EDI concepts of human rights, psychological safety, privilege, and allyship. Furthermore, potential allies need to actively seek out opportunities to learn about the history and experiences of those from marginalized groups. Next, participants need to develop self-reflective practices of inquiring and accepting their sense of identity — including ways in which they may be privileged or marginalized. Lastly, participants reflected on the value of exploring the nuanced aspects of EDI with others in their group discussions.

Participants' understanding of secondary EDI terms, including human rights, privilege, psychological safety, and allyship all increased due to the Active Allies course, as is shown in Figure 5-8. As was found with a Wilcoxon signed-rank test, the increases in the understanding of human rights ($Z = -2.57, p = 0.01$), psychological safety ($Z = -3.82, p < 0.001$), privilege ($Z = -3.23, p = 0.001$), and allyship ($Z = -3.67, p < 0.001$) were all statistically significant between the pre-and post-assessment questionnaires. One participant commented they “now have a shared language of terms and an understanding of the EDI definitions that I did not have before. I can now speak from a place of learning rather than a place of ignorance. This course has also helped me become more aware of my own biases and privileges”.

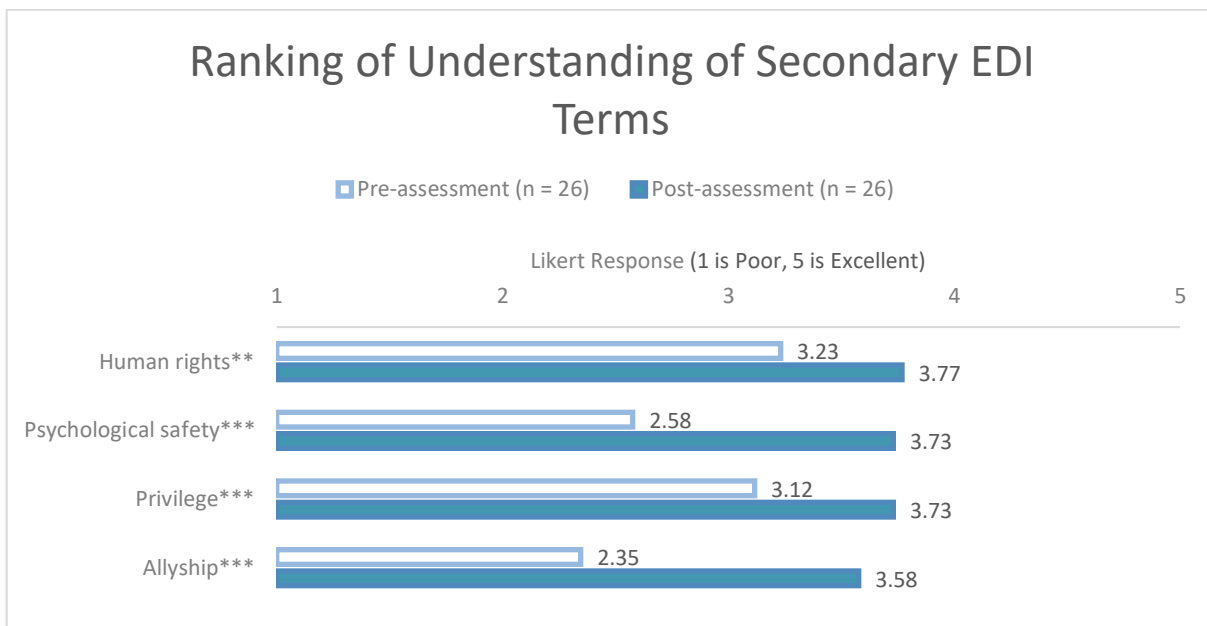


Figure 5-8: Understanding of Secondary EDI Terms

Participants' likelihood to seek out opportunities to learn about the histories of others increased significantly following the Active Allies course. Participants' likelihood to seek out opportunities to learn about the history or experiences of others increased significantly from a mean Likert response of 1.96 to 4.30 ($Z = -2.14, p = 0.03$). The group with the largest increase in seeking out learning about those different from them were those in the majority group — who had no identified aspects of marginalized identity. The mean Likert response for those with no marginalized identity increased by 1.0, compared to a 0.47 increase for those with one aspect of marginalized identity, and a 0.17 increase for those with 2 or more marginalized aspects of

identity. When describing the impact of the course, 53% (n = 14) of participants credited the course content with being impactful. In the post-assessment questionnaire, (n = 5) participants noted that the most impactful exercise involved reviewing historical human rights timelines for an equity-deserving group in Canada.

In advancing on their allyship journey, participants need to acknowledge and accept their own identity while reflecting on situations where they may hold privilege or be marginalized. Participants' responses on the pre-assessment indicated high support for equity measures (mean response 4.35) and understanding of privilege (mean response 4.27); however, participants' understanding of their privilege or marginalization statistically improved due to the Active Allies course ($Z = -1.96, p = 0.05$). Twelve (46%) participants acknowledged their privilege due to their gender, sexual orientation, ethnicity, abilities, or socio-economic standings. Additionally, some participants reflected that they may at times be marginalized because of their gender, sexual orientation, ethnicity, sexual orientation, disability, or not having English as their first language.

The group discussions were intended to provide a psychologically safe place for participants to explore nuanced concepts of EDI while practicing essential allyship skills, such as active listening and perspective-taking. As was identified in the previous phase of the study, understanding EDI is best done in a community of fellow learners. The thematic analysis revealed that 61% (n = 16) of participants credited the positive impact of the course to their discussion groups. Many participants noted that the group discussions were a psychologically safe place to explore EDI concepts. One participant noted:

The Active Allies course created a psychologically safe environment through the group sessions where the group could be open and honest about our thoughts, without the threat of judgment. I will now seek out these safe spaces in my personal and professional life so I can continue to share my experience and perspective.

Additionally, another participant noted, the “group discussions boosted my confidence in speaking about my personal experiences.”

As a result of the Active Allies course, participants progressed through the realizing stage of the Ally Activation model (Peltier-Huntley & Dias, 2023). First, participants' understanding of secondary EDI terms improved. Additionally, participants' intention to seek out opportunities to learn about the history and experiences of those from marginalized groups increased. Next,

participants developed self-reflective practices of inquiring about and accepting their sense of identity and increased their understanding of ways in which they may be privileged or marginalized. Lastly, participants reflected, listened, and gained the confidence to share their firsthand experiences with others in their group discussions.

5.3.6 Active Allyship

In examining self-reported intentions to move from potential ally to active ally, there were several factors we examined concerning the five equity-deserving groups, such as a belief in the importance of advancing EDI to benefit each group, participants' confidence in discussing challenges related to each group, and the importance of achieving equity for each group. Lastly, participants were asked to describe and share examples of their allyship actions and plans for continued practice following the course.

As is shown in Figure 5-9, participants' understanding of the importance of advancing EDI for five equity-deserving groups increased due to the Active Allies course. The largest increase was seen with the understanding of the challenges faced by members of the 2SLBGTQ+ community and women. Indigenous peoples were the group that participants initially ranked as facing the highest level of challenges and is likely due to the clear organizational commitment that the university has made to Truth and Reconciliation and efforts to Indigenize the institution.

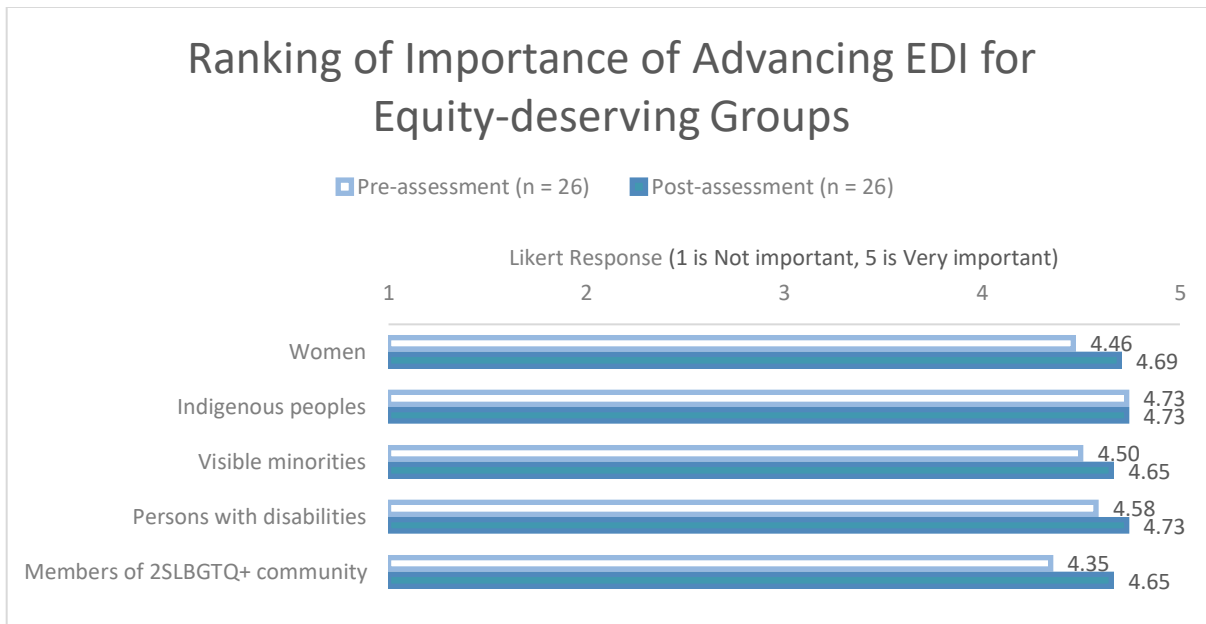


Figure 5-9: Importance of Advancing EDI for Equity-deserving Groups

As part of advancing EDI, participants were asked about their intentions to share their firsthand experiences with challenges or advantages with others. Participants' intention to share increased from a mean response of 3.59 to 4.13 because of the Active Allies course.

Additionally, participants' confidence in sharing aspects of their identities with others increased from a mean of 3.67 to 4.09 because of the course. When analyzing disaggregated data, those belonging to equity-deserving groups were found to have had the largest increase in confidence to discuss challenges faced by the groups they belonged to compared to their potential allies. For example, members of the 2SLGBTQ+ community's confidence in discussing issues related to sexual orientation and expression increased by 1.0 compared to a 0.27 increase for cis-gendered and straight participants. Participants acknowledged their increase in confidence and intentions to share their firsthand experiences was largely due to the group discussions.

Lastly, the Active Allies course increased participants' intentions to act as allies. In the pre-assessment survey, many participants noted their journey to allyship began by taking the Active Allies course and doing some personal reading. Before taking the course, no participants mentioned how or if they were engaging with other people as part of their learning. Following the course, participants could clearly articulate the actions they were taking to act as active allies, although many were hesitant to declare they were an ally. As found in the post-assessment

questionnaire, the predominate themes around what participants are doing differently following the course included being alert, aware, or active listening (n = 11, 42%), learning (n = 8, 31%), engaging in discussion about EDI (n = 5, 19%), creating safe places for others (n = 2, 8%), and speaking up about inequities (n = 2, 8%). Additionally, participants shared their allyship commitments in support of their allyship practice. The two themes for participants' allyship commitments were proactively listening to and learning from others (n = 17) and seeking to react and support others in the moment (n = 3).

5.4 Discussion

5.4.1 Psychologically Safe Learning

The Active Allies pilot course engaged 26 participants from the University of Saskatchewan's Engineering College to voluntarily complete a 4-week course. Eighty-eight percent of the participants who completed the course had one or more aspects of marginalized identity. As theorized in the Ally Activation Model, individuals may seek out allyship after personally experiencing inequities (Peltier-Huntley & Dias, 2023). Additionally, this finding is supported by Williams and Sharif (2021) which found that allies are more likely to have marginalized aspects of their identities.

As only three (13%) of the participants fell into the majority group (i.e., cis-gendered, straight, white, able-bodied men), does allyship training, such as Active Allies need to be made mandatory to engage those in the majority group? Wilson et al. (2021) highlight that engaging men in allyship is essential to sustain cultural shifts which support equity-deserving groups. Additionally, leaders and faculty members — who are most frequently male in engineering — can act as role models to advance EDI efforts by acting as allies (Cheng & Groysberg, 2021). Recently, Isaac et al. (2023) found that fostering psychologically safe learning environments with critical discussions and opportunities for practicing allyship strategies helps foster post-training skill transfer in engineering students. Many studies stress the importance in creating psychologically safe ways for potential allies to engage in learning which minimize defensiveness or shame (Erskine & Bilimoria, 2019; Nash et al., 2021; Onyeador et al., 2021; Ormand et al., 2022). However, in the absence of mandatory training, there is a risk that those who can and should act as allies in the profession, miss out. Future research should explore accountability measures to entice those in the majority groups to become active allies. These additional measures could include regularly offering voluntary allyship training to signal to

potential allies — especially those in the majority group — that it is safe for them to engage in allyship and recognizing allyship actions as part of professional development — mandated by professional regulators.

Additionally, organizations have a role to play in establishing safe ways for all people to engage in conversations about EDI. Due to the systemic nature of inequity, many studies have indicated the importance of establishing and integrating organizational EDI strategies (Bersin, 2021; Cunningham et al., 2021; Hirsch et al., 2023; Lutz & Paretti, 2021; Onyeador et al., 2021; Ormand et al., 2022). In our study, those in the majority groups in the college may also have not engaged in allyship training due to a lack of awareness about EDI because of the absence of an organizational EDI strategy. Because of clear institutional commitments towards Truth and Reconciliation and Indigenizing curriculums, participants' level of awareness of the social challenges faced by Indigenous peoples in Canada was relatively higher before taking the course. In contrast, the awareness of challenges faced by other equity-deserving groups, such as women, members of the 2SLGBTQ+ community and disabled persons, was lower. In line with Nash et al. (2021), future offerings of the Active Allies course could seek out organizations which have an established EDI strategy or use control groups to monitor changes in competencies or awareness when organizations implement EDI initiatives.

5.4.2 Essential EDI Language

To our knowledge, this study was novel in examining common EDI language. Kenneth Burke stresses the importance of “language as a form of action,” particularly with social action and recognized language is essential for understanding situations and taking action; action involves ‘conflict, purpose, reflection, and choice’ (Gusfield, 1989, p. 10). Furthermore, Burke’s concept of dramatic function, or language-as-action, focuses on “the coaching of an attitude” to “induce cooperation” in an audience capable of responding — a process termed “secular prayer” (Burke, 1959, p. 322). Coaching an attitude in potential allies considers not just how potential allies feel in a situation, but how they may act (Burke, 1959). With Burke’s theories in mind, to activate allies and shift engineering culture, individuals need a common understanding — of situational context and language — from which to start. We supported participants to understand and gain comfort in discussing EDI language. As a result, participants’ understanding, confidence, and the frequency in which they discussed EDI topics increased. We

recommend that future research investigating organizational culture shifts also monitors the frequency, confidence, and accessibility of EDI language.

5.4.3 Broad Approach to Allyship

To recognize instances of inequity, allies need to be aware of the challenges faced by marginalized groups (Basford et al., 2014; Hirsch et al., 2023; Onyeador et al., 2021; Weidler-Lewis, 2020). We believe our study is unique in its approach to broadly encouraging allyship with five equity-deserving groups rather than supporting groups belonging to one marginalized group or a group at the intersection of two marginalized identities. Additionally, we believe our study is one of a few that has related allyship to engineering. Understanding social challenges faced by equity-deserving groups may help potential engineering allies to recognize everyday instances of inequity and systemic bias. Understanding bias is especially important for engineers who can address social challenges of the people they aim to serve through their practice (Hirsch et al., 2023; Pla-Julián & Díez, 2019). Additionally, engineering allies can continue to expand their understanding of complex social challenges and develop allyship competencies with their peers. Previous studies have shown that allyship-focused discussion groups are effective at engaging, supporting, and educating potential allies (De Souza & Schmader, 2022; Nash et al., 2021; Wilson et al., 2021). Similarly, participants in our study indicated a rich amount of learning resulted from practicing allyship skills and exploring EDI concepts in their group discussions. Furthermore, the course videos we created showcased experiences of those from a range of experiences, ethnicities, genders, and abilities — many of whom were also engineering professionals. In line with Warren et al. (2022), the course videos used the “psychological and intellectual capital [of professionals from industry and academia to] sincerely” (p. 32) share their firsthand experiences and lessons learned with allyship. Additionally, in line with recommendations from Warren and Warren (2021), discussion groups can reinforce allyship values with participants, which may support sustained allyship behaviors. Furthermore, it is important to normalize and create psychologically safe ways for all people to engage in EDI learning (De Souza & Schmader, 2022). Lastly, the course content and activities were developed to prevent participants from needing to disclose personal experiences with inequity. As a result, many participants indicated their group discussions contributed to the psychological safety they felt to engage in and practice allyship competencies broadly with five equity-deserving groups.

Additionally, Louis et al. (2019) call for researchers to examine differences in allyship intentions based on identity and intergroup belonging; simply put, are allies only allies for people like them? In the traditionally male-dominated engineering profession, limiting who receives allyship could pose a problem for fostering EDI within the profession. However, our findings indicate that, although participants with marginalized aspects of their identities leaned into the concepts of allyship, allyship tendencies were not only in line with participants' identities. All participants identified equity-deserving groups — to which they did not belong — that they wanted to support and continue to learn about. While many of the participants in our study gained the most confidence in discussing challenges related to their own identity groups, they were most likely to recognize that groups they did not belong to faced social challenges. As a result, participants in our study tended to center their continuous learning intentions on groups they did not belong to and, as such, are working to become active allies in their workplaces. To sustain allyship learning across equity-deserving groups, continuous professional development requirements, common in the Canadian engineering profession, could be aligned with allyship intentions.

5.5 Conclusion

This study aims to advance EDI in the context of the Canadian engineering profession; however, the findings from this study may apply to individuals and organizations looking to advance along their EDI journey. Engaging potential allies to understand and address social challenges faced by equity-deserving and underrepresented groups will support advancing EDI in any organization. The key insights we gained from the allyship course were as follows:

1. EDI language is an essential allyship competency,
2. Psychological safety is critical for all potential allies engaging in EDI learning and results in rich learning, and
3. The absence of organizational EDI strategies introduces a risk to the sustained activation of allies.

By testing interventions to activate allies within a Canadian engineering college, the study's findings help to fill in gaps in the literature on how to foster allies for the benefit of five equity-deserving groups. Additionally, outcomes from this study will inform the refinement of interventions to be tested with a larger population employed in the traditionally male-dominated Canadian mining industry.

6 Lessons Learned from the Active Allies Mining Industry Intervention

With the promising results from the Active Allies pilot conducted in a Canadian engineering college, we also wanted to test the course in a workplace setting, as we recognized that conducting training in an educational institution may be different than conducting training in the workplace (Brandi & Iannone, 2021; Dixit & Sinha, 2022). With the collaboration of the IMII industry committee, we engaged 76 participants from the Saskatchewan mining industry to participate in a workplace pilot of the Active Allies course in the fall of 2023.

Like the findings in the previous phase, we found that the largest improvements that participants experienced due to the Active Allies course were related to communication. In both the engineering college and the mining industry trials, we found the Active Allies course supported increasing awareness and knowledge through the course content which supported deeper learning and practicing allyship skills in group discussions. In both Phase 3 and 4, participants' understanding of EDI terms increased and as a result, they indicated engaging in more frequent conversations about EDI topics. While in Phase 3 we found that these conversations were more frequently occurring with friends and family, in Phase 4 we found these were more likely to occur in the workplace. We believe this shift is due in part to the hierarchical organizational structure in mining workplaces and in part due to the organizational commitment towards EDI in mining. In Phase 3 we identified a risk to sustaining an allyship practice if the organization has not made a clear commitment to advancing EDI. In Phase 4 we found that having an organizational commitment to EDI was not only important for sustaining allyship but also provided motivation for participants to initiate allyship learning. Lastly, we found that facilitating cross-industry training with those interested in advancing EDI can create the conditions necessary for psychologically safe discussions. A comparison of the findings from Phase 3 and 4 is shown in Appendix A.

In Phase 4 of the study, Jocelyn led the request for ethics approval, the design of the methodology, participant recruitment, facilitating 9 of the 15 discussion groups, data collection, analysis, and reporting. and facilitated 9 of the 15 discussion groups. Dr. Moazed's role on the project consisted included reviewing course content, facilitating 6 of the 15 discussion groups, collecting data from the learning management system, de-identifying data sets, reviewing thematically coded data, and report editing. The following manuscript, *Facilitating inclusion:*

Workplace allyship interventions to foster a practice of inclusion in Canadian mining, is co-authored with Dr. Rosa Moazed and was submitted for publication in the CIM Journal in 2024.

6.1 The Need for Allyship in Mining

The Canadian mining industry is on the threshold of a social transformation. This social transformation is due in part to rising awareness about the social challenges that marginalized groups in Canada — including women, Indigenous peoples, visible minorities, Black people, persons with disabilities, and 2SLGBTQIA+ people — have historically faced and continue to face (Black Lives Matter, 2020; Khomami, 2017; Rio Tinto & Elizabeth Broderick & Co., 2022; Truth and Reconciliation Commission of Canada, 2015). Additionally, a tightening mining labor market has resulted in an urgent need for the Canadian mining industry to advance equity, diversity, and inclusion (EDI), and to take steps towards Truth and Reconciliation (McKinsey & Company, 2023; Mining Industry Human Resource Council, 2023). Furthermore, Canadian critical minerals are urgently necessary to support the global energy transition (Natural Resources Canada, 2022). Recently to support social transformation efforts, The Mining Association of Canada (2023a, 2023b) has outlined a path forward for EDI and psychological safety by developing two Towards Sustainable Mining (TSM) frameworks. The mining industry must seize this moment to transform its workplaces, retaining a diverse and inclusive workforce that is capable of meeting labor demands and supplying critical minerals.

A body of research aiming to understand and address social challenges in, and around Canadian mining has been growing for more than a decade (Hammond, 2015; Hughes, 2012; Nightingale et al., 2017). As a result, there is a greater focus on mental health and psychological safety in mining workplaces today. Additionally, psychological safety — an absence of harm or threat of harm to a worker (Canadian Standards Association & Bureau de normalization du Quebec, 2013a) — is a natural evolution from the advances in health and safety that have been occurring over many decades in mining (Peltier-Huntley, 2022). With a broader conceptualization of health and safety — inclusive of psychological safety through MAC’s TSM protocols — the mining industry has shifted to consider the whole person.

Similarly, the concepts of EDI consider the whole person, their identities, and the systems they are part of. Equity is a “means of fairness of treatment for [people], according to their respective needs. This may include equal treatment or treatment that is different but which is considered equivalent in terms of rights, benefits, obligations, and opportunities” (Pavlic et al.,

2000, p. 5). Advancing equity requires a deep understanding of historical marginalization, and the integration and assessment of fairness in organizational systems. Diversity, simply put, is about variety. In the Canadian context, diversity indicators often measure and describe levels of education, age or physical, gender, sexual orientation, religious beliefs, and/or racial differences (Peltier-Huntley, 2019). Many reports have highlighted that the representation within Canadian workplaces and the mining industry is not representative of our population. Groups like women, Indigenous peoples, and visible minorities are underrepresented relative to the Canadian population (Mining Industry Human Resource Council, 2023; Peltier-Huntley, 2023). Lastly, we define inclusion as involving both feeling a sense of belonging and experiencing psychological safety to be one's authentic self (Peltier-Huntley & Moazed, 2024). Inclusion can be measured by examining the lived experiences of all people, including those who have been historically marginalized.

Recent studies have found that inclusion is lacking in mining for underrepresented groups — such as women and Indigenous peoples— resulting in these groups, experiencing less belonging, lower levels of psychological safety, and even higher threats to physical safety (Carter, 2022; National Inquiry of Missing and Murdered Indigenous Women and Girls, 2019; Peltier-Huntley, 2022; Rio Tinto & Elizabeth Broderick & Co., 2022). The resulting differential treatments are evident in high rates of workplace discrimination and harassment (Peltier-Huntley, 2022; Rio Tinto & Elizabeth Broderick & Co., 2022), higher rates of employee turnover (McKinsey & Company, 2021b), and lower representation in leadership roles for women (McKinsey & Company, 2021b). Lastly, while the above-mentioned studies primarily examine gender, there is ample evidence that Indigenous peoples, racialized persons, persons with disabilities, 2SLGBTQIA+ persons, other marginalized groups, and those at the intersections of marginalized groups also experience negative differential treatment in Canadian workplaces (Godley, 2018; Mining Association of Canada, 2020; Thorpe-Moscon & Ohm, 2021).

Despite, the abundance of evidence advocating the advancement of EDI within the mining industry, a lack of awareness of inequitable, exclusive, and differential treatment seems to persist among individuals holding positions of power (Peltier-Huntley, 2023). The day-to-day experiences of those in leadership may be much different than those who are the “only” person like them in their department. With caution, Nixon (2019) contends, if inequities are framed as problems solely for marginalized groups, then we may focus our solutions primarily on “fixing”

these same groups rather than addressing the root causes that support ongoing marginalization. Instead, Amaechi (2020) encourages us to self-reflect on ways that we might be privileged and states that having “privilege doesn't make your life easy, but understanding it can help you realise why some people's lives are harder than they should be.” Recognizing our privileges enables us to advocate for those who are more marginalized than us, leading to greater inclusivity and equity within our communities and organizations. Leaders, therefore, have an important role to recognize the power they hold due to their authority, power, and personal privileges (Peltier-Huntley, 2023).

Training individuals to become workplace allies is part of the solution to support transformational social change. Allyship is a means to engage everyone to increase their awareness, knowledge, and skills to support those who are marginalized or under-represented. In this study, we examine how a workplace training intervention called Active Allies was used to encourage participants in the Canadian mining industry to develop an ongoing practice of inclusion or allyship. We define allyship as a practice of inclusion where — through listening, learning, and reflection on personal experiences and privileges — people actively support historically marginalized persons and communities in achieving their full potential (Peltier-Huntley & Moazed, 2024). Also, to recognize the complex and systemic nature of social problems in the Canadian mining industry, we define active allyship as taking actions to shift culture to be inclusive and to shift systems to be more equitable.

This study is the fourth phase in a collaborative, multi-year study funded in part by the International Minerals Innovation Institute (IMII), Mitacs, Vanier Canada, and Women in Mining (WIM) Canada. The study is unique in that it is led not only by an academic committee, but by an IMII industry committee with representation from four mining companies — BHP, Cameco, Mosaic, and Nutrien. In this fourth phase of the study, researchers engaged 76 participants, who work directly in the Canadian mining industry, in a 4-week Active Allies course. In the Research Design and Methods section, we offer a brief overview of the Ally Activation change model developed in a previous phase of the study, discuss our methods, and give an overview of the Active Allies course. Next, in the Results section we share our findings from analysing data collected from the 76 participants using the Ally Activation model framework. Finally, we will discuss the implications of our findings on implementing future EDI workplace interventions and conclude with our key findings.

6.2 Research Design and Methods

6.2.1 Theoretical Framework

According to the Ally Activation Change Model (See Figure 5-1), individuals typically embark on their unique allyship journey, transitioning through various stages. The journey begins at a clear state of “unawareness” and continues on to the stage at which individuals become “leaders of change” (Peltier-Huntley & Dias, 2023). This theory of change informs both individual and organizational interventions which may foster and support EDI advancement.



Figure 6-1: Ally Activation Change Model (Peltier-Huntley & Dias, 2023)

By following the Ally Activation change model, individuals and organizations can advance on their EDI journey (Peltier-Huntley, 2023). The model assumes that people start in a state of unawareness and through exposure to inequities begin to progress through the model. In the *awareness* stage, participants became aware of inequities they have witnessed, experienced, or otherwise learned about from others. If participants have a marginalized aspect of their identity, they are likely to first proceed through the model based on a marginalized aspect of their identity. In the *support-seeking* stage, people will question and seek to understand their experiences with inequity by engaging with a trusted person or persons. In the *realizing* stage, participants will experience a series of events which are marked by processing past experiences with inequity, developing allyship skills, finding a community of fellow allies, and gaining acceptance over the inequities they have witnessed or experienced. Lastly, in the *leading change* stage, allies are skilled and motivated to practice inclusion, and may work to sustain their allyship practices by engaging others and continuing their learning.

6.2.2 Methods

Based on the Ally Activation model, the current study adopted an intersectional transformative mixed-methods design and methods that were successfully trialed in a previous phase (Peltier-Huntley & Moazed, 2024). This interdisciplinary study draws on scholarship from disciplines such as rhetoric (communication), education, human rights law, policy, and sociology with the intent of developing transformative solutions to advance EDI in mining. Research methods for the study were approved by the University of Saskatchewan's Research Ethics Board.

Participant recruitment efforts targeted employees and contractors who worked for the four Saskatchewan-based mining companies that are contributing to the study through an IMII industry committee: BHP, Cameco, Mosaic, and Nutrien. Each of these companies shared recruitment communications with the potential participants and researchers became aware of participants once they completed an online screening questionnaire which captured information about participants' self-identity, gender, profession, employer, education, and connection to EDI. Next, participants who completed the recruitment questionnaire were invited to complete a pre-assessment questionnaire and confirm consent to participate in the study. The pre-assessment questionnaire asked a range of questions to understand participants' baseline knowledge, motivation, and competencies related to allyship. Following completion of the pre-assessment and confirmation of consent, participants were added to the online course site and placed in a discussion group with up to seven other participants. Discussion groups were formed based on participants' availability and met weekly using Microsoft Teams during the 4-week Active Allies course. Additionally, 41 participants completed some but not all steps towards entering the course or asked to be removed from the study prior to starting the course due to changes in their availability.

Four to eight weeks following the completion of the course, 66 participants completed a post-assessment questionnaire. Like the pre-assessment, the post-assessment questionnaire asked a range of questions to understand participants' knowledge, motivation, and competencies related to allyship, sought feedback on the course, and allowed participants to share their continuous learning action plans.

Artifacts, including group discussion notes, course quiz responses, and text responses from the three questionnaires were imported to packaged software (NVivo, QSR International Pty Ltd,

Victoria, Australia) for qualitative analysis. Qualitative data analysis consisted of using NVivo to thematically code and analyze written responses using a critical rhetorical method, generative criticism. Generative criticism is a method for digging deeper into artifacts and allows researchers to pose and answer specific questions about artifacts that catch their attention (Foss, 2004). The method for using generative criticism in this study included: 1) broadly coding the artifact; 2) formulating an explanation; and 3) detailed coding of the artifact (Foss, 2004). In this study, generative criticism allowed researchers to look for common themes across participants' artifacts.

Quantitative survey questions were analyzed with SPSS statistical software (IBM, Armonk, NY). Five-point Likert questions were summarized by the mean response of participants in the pre-assessment and post-assessment questionnaires. Using a Shapiro-Wilk test, the quantitative data was found to not follow a normal distribution. A Wilcoxon signed-rank test — a non-parametric version of a paired t-test — was selected to check for significant differences in participants' responses between the pre-and post-assessment questionnaires.

6.2.3 Active Allies Course

The Active Allies course allowed learners to asynchronously progress over four weeks through eight online modules. Each module comprised a video lasting 7 to 20-minutes. The videos featured the two researchers and eight allies who had participated in a previous project phase. We also provided other publicly available resources to reinforce course concepts and allow for further learning. Additionally, two of the industry companies contributed introduction and conclusion videos to reiterate the importance of EDI within their organization. In line with the federal *Employment Equity Act* (Canada, 2023) the course broadly encouraged allyship across five equity-deserving identity groups: women, Indigenous people, visible minorities, persons with disabilities, and members of the 2SLGBTQIA+ community. These five groups are thought to be underrepresented and marginalized in Canada's mining industry, although data to verify underrepresentation is limited for some groups. To reinforce concepts learned in the online modules, participants also completed self-reflection exercises, end-of-module quizzes, and participated in weekly group discussions. The learning objectives for the course aligned with the Ally Activation model, described previously.

6.3 Results

6.3.1 Participant Demographics

Of the 76 participants who participated in the Active Allies pilot course, 31% worked for BHP, 32% for Cameco, 20% for Nutrien, and 13% for other employers, including Mosaic, contractor or supplier companies. Five participants (7%) had less than 3 years of experience, 2 (3%) had 3–5 years of experience, 5 (7%) had 5–10 years of experience, 15 (20%) had 10–15 years of experience, 12 (16%) had 15–20 years of experience, 13 (17%) had 20–25 years of experience, and 24 (32%) had more than 25 years of experience. Thirty-five participants (46%) were in non-supervisory roles, 29 (38%) were in supervisory roles, and 12 (16%) were in senior leadership roles. Professionally, 21% identified as professional engineers, 12% had engineering degrees and were working towards their professional designation, 4% were engineering students, and 63% had non-engineering backgrounds. 53% of participants identified as women, 47% as men, and no one identified as non-binary. Additionally, 62% of participants identified as white, 21% identified as visible minorities, and 17% identified as Indigenous. Lastly, 7% of participants identified as being part of the 2SLGBTQ+ community and 7% identified as being disabled persons. In total 19 people (25%) identified as having no marginalized identities (i.e., cis-gendered, straight, white, and able-bodied males) while 41 participants (54%) were part of at least one marginalized group and at least 16 people (21%) were part of two or more marginalized groups.

Additionally, thematic analysis of the questionnaires revealed that participants were drawn to participate in the course for several reasons: the most common being *to understand my role as an ally or support others* (n = 48, 63%), *to increase my EDI knowledge* (n = 30, 40%), *to help change my workplace or industry* (n = 23, 30%), and *to expand my skills* (n = 22, 29%).

6.3.2 Awareness

The first stage of the Ally Activation model is awareness, where potential allies understand the challenges faced by marginalized groups. These challenges or inequities may include harmful biased behaviors, such as microaggressions, discrimination, or harassment. To support allies at this stage in their development, we included Mine Shift's (2024) DIGGER bystander

intervention tool⁴ in the Active Allies course; bystander interventions are a form of reactive allyship (De Souza & Schmader, 2022, 2024). To understand participants' intentions to act as active bystanders, we asked questions about their intentions to speak up in the moment to disrupt instances of inequity. We distinguish between “informally” raising a complaint — where one speaks up in the moment — and “formally” raising a complaint, which is further described in the support seeking stage.

Recognizing harmful biased behaviors is an important allyship skill in the awareness phase. Participants' understanding of forms of inequities increased significantly between the pre- and post-assessment questionnaires, as is shown in Figure 6-2. Using a Wilcoxon signed-rank test, the increases in understanding of bias ($Z = -2.41, p = 0.02$), discrimination ($Z = -3.09, p = 0.002$), harassment ($Z = -2.66, p = 0.008$), and microaggressions ($Z = -4.15, p < 0.001$) were found to be statistically significant. Additionally, in the post-assessment survey, 48 (73%) participants shared examples of discrimination or harassment incidents they had witnessed or experienced. Of these incidents, the majority involved sexist comments from co-workers ($n = 34, 70%$) and a few involved racist remarks ($n = 17, 35%$).

⁴ DIGGER stands for direct action, indirect action, get a co-worker, get an authority, engage target, and record and report.

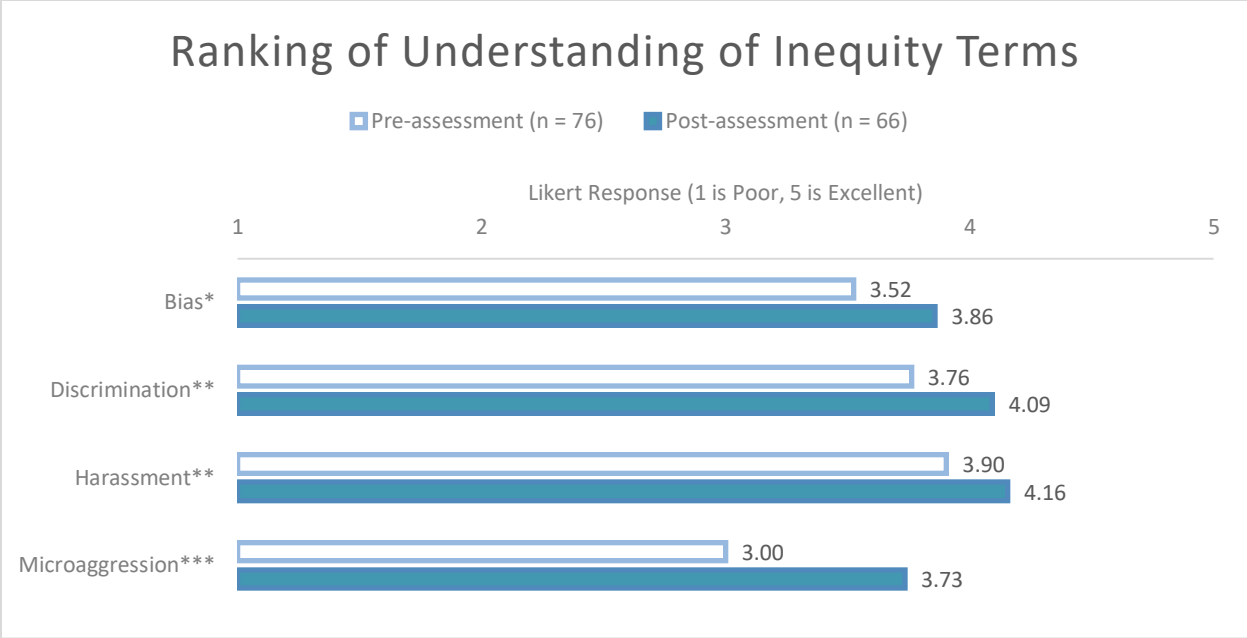


Figure 6-2: Understanding of Inequity Terms

When recognizing harmful biased behavior, it is also important to understand how the different types of inequities may impact targeted individuals, as what may be harmful to one person may not be to another. Between the pre- and post-assessment surveys, participants improved their understanding in the likelihood that the five equity-deserving groups included in our study would experience challenges in the workplace. As shown in Figure 6-3, the largest mean increase was the likelihood that Indigenous peoples would experience challenges in the workplace; however, none of these increases were found to be statistically significant ($p > 0.5$). When analyzing the mean responses with the disaggregated demographic data, we found that men’s belief in women experiencing challenges improved by an average of 0.2 compared to no change for women.

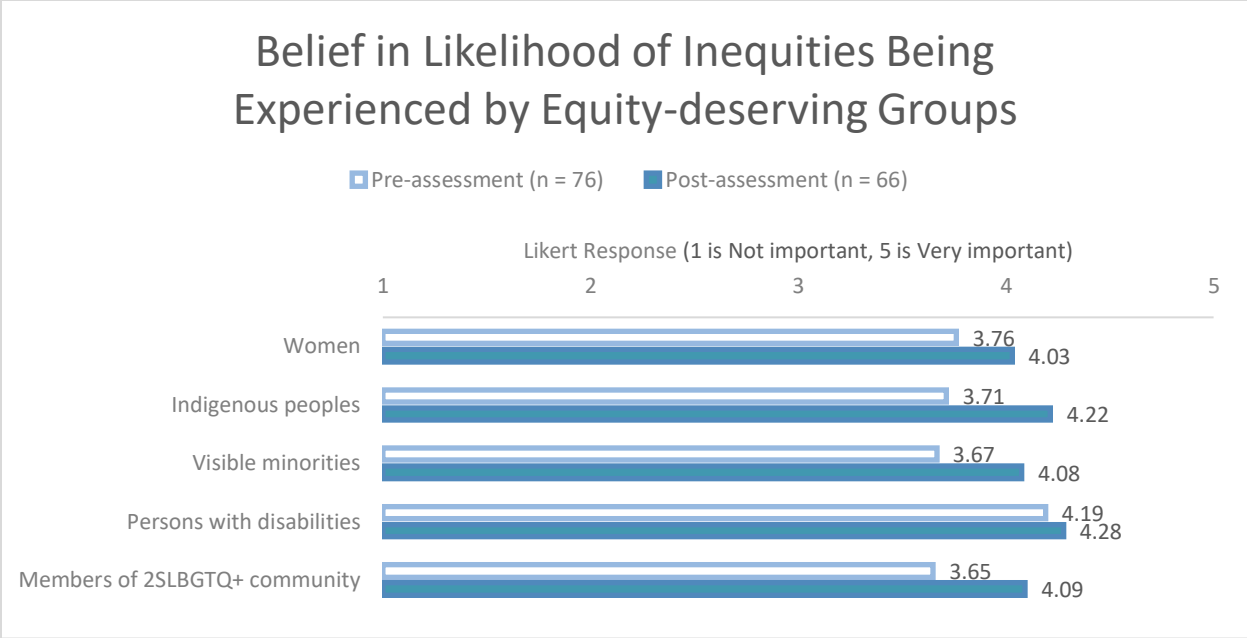


Figure 6-3: Belief in the Likelihood of a Group Experiencing Workplace Challenges

Active allies need to be prepared to intervene in the moment to address biased behaviors. As described earlier, we refer to the bystander intervention of “speaking up” as informal reporting. Participants were asked if they would informally report discrimination and harassment incidents when they were the victim, witness, or if they were confided in by a co-worker both before and after taking the Active Allies course, as shown in Figure 6-4. After completing the course, the Wilcoxon signed-rank test showed that participants were significantly more likely to informally report, or “speak up”, if they experienced ($Z = -2.19, p = 0.03$) or witnessed a form of inequity ($Z = -2.18, p = 0.03$), compared to if they were confided in by a co-worker ($Z = -0.47, p = 0.6$). Despite the higher likelihood to speak up following the Active Allies training, many participants ($n = 32$) also described the lack of support that they felt when they had previously spoken up following workplace inequities. The important skills to support targeted individuals and the peers or co-workers who may have witnessed harmful biased behavior are discussed further in the next section.

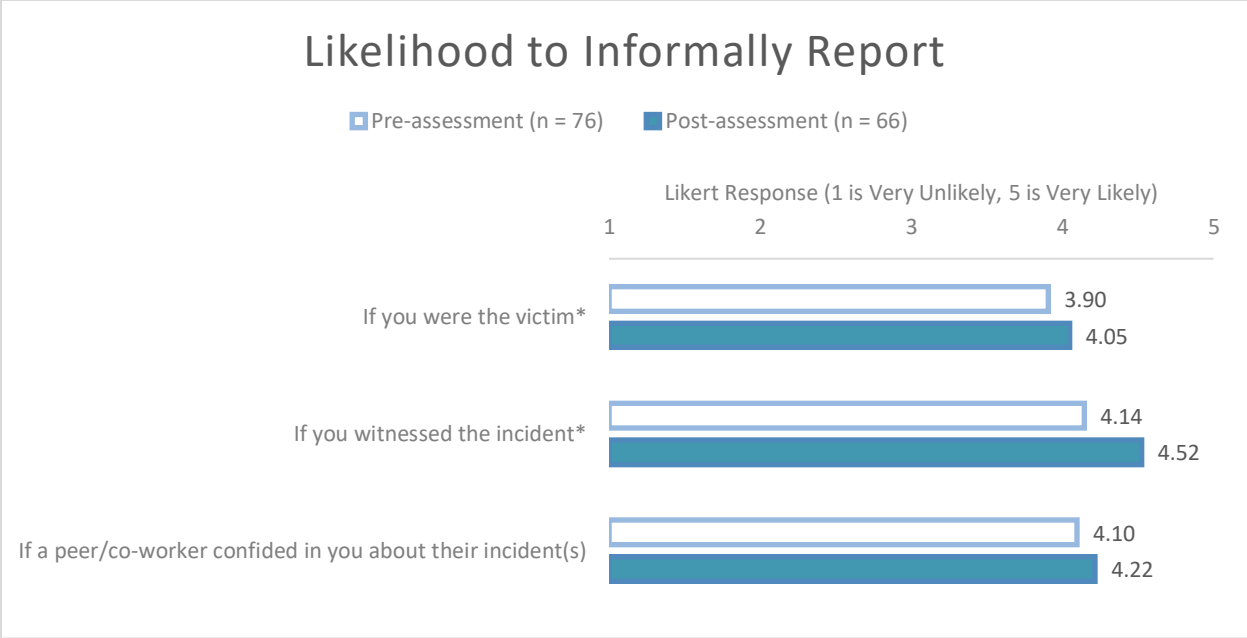


Figure 6-4: Likelihood to Informally Report

Our findings in the awareness stage, indicate that potential allies are able to improve their ability to recognize different forms of inequities that may happen in the workplace. Additionally, participants were able to develop the necessary skills using Mine Shift’s DIGGER bystander intervention to significantly increase their confidence to speak up in the moment.

6.3.3 Support Seeking

To support or seek support from others, active allies need to be competent and confident to speak about the challenges or inequities they have become aware of. These conversations may need to occur with a variety of people to support formal reporting the incident and support the well-being of those negatively impacted by the harmful biased behaviors. As such, in the support-seeking stage potential allies need to understand foundational EDI terms of equity, diversity, inclusion, and intersectionality. Furthermore, in the support-seeking stage, allies may need to gather further information through active listening and be able to formally report inequities.

Active allies who engage in supporting others need to be comfortable discussing a variety of social topics. As shown in Figure 6-5, participants understanding of primary EDI terms significantly improved between pre- and post-assessment. Additionally, the improvements in understanding diversity ($Z = -3.12, p = 0.002$), inclusion ($Z = -3.36, p < 0.001$), equity ($Z = -$

3.29, $p = 0.001$), and intersectionality ($Z = -5.35, p < 0.001$) were found to be statistically significant using the Wilcoxon sign-ranked test. The participants that increased their understanding of intersectionality the most were those who had no marginalized aspects of identity — those who have the potential to act as universal allies for any marginalized group. Additionally, participants increased understanding of these foundational terms may contribute to increased confidence in discussing EDI topics. As one participant shared, “I need the education piece to feel comfortable enough in my knowledge to have discussions with others.”

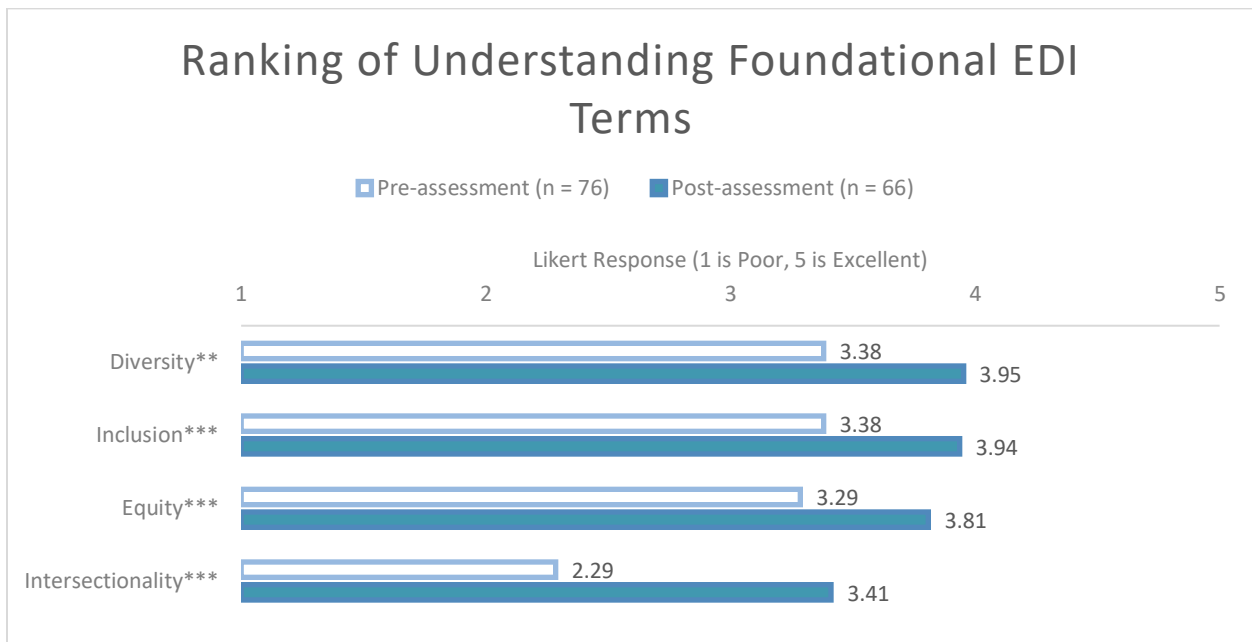


Figure 6-5: Understanding of Foundational EDI Terms

An important skill in the support seeking phase to gather information to support targeted individuals, witnesses, and bystanders is active listening. Participants' most common responses in the final module quiz while reflecting on inclusive actions that they have been practicing since starting the Active Allies course was *active listening*. Thematic analysis of open-ended questions on the post-assessment survey revealed that participants felt *active listening* is an important way to learn from others and a way to create psychologically safe spaces for more voices.

To be able to offer support or seek it from others, active allies need to have a degree of confidence in discussing challenges faced by under-represented groups. For example, if an Indigenous woman raises a discrimination concern to her white, male supervisor, he may need to advocate to others in the organization to address both racism and sexism. As shown in Figure

6-6, participants increased their confidence in discussing concerns for all five equity-deserving groups following the completion of the Active Allies course. Although not found to be statistically significant with the Wilcoxon signed-rank test, the largest mean improvements between the pre- and post-assessment were in discussing challenges faced by members of 2SLGBTQIA+ community ($Z = -1.63, p = 0.1$), persons with disabilities ($Z = -1.87, p = 0.06$), due to gender ($Z = -0.19, p = 0.9$), Indigenous peoples ($Z = -1.55, p = 0.1$), visible minorities, ($Z = -1.69, p = 0.09$). Additionally, people who did not report having any aspects of marginalized identity experienced the most positive improvements on this topic by an average improvement of 0.2 compared to 0.07 for those with one or more aspects of marginalized identity.

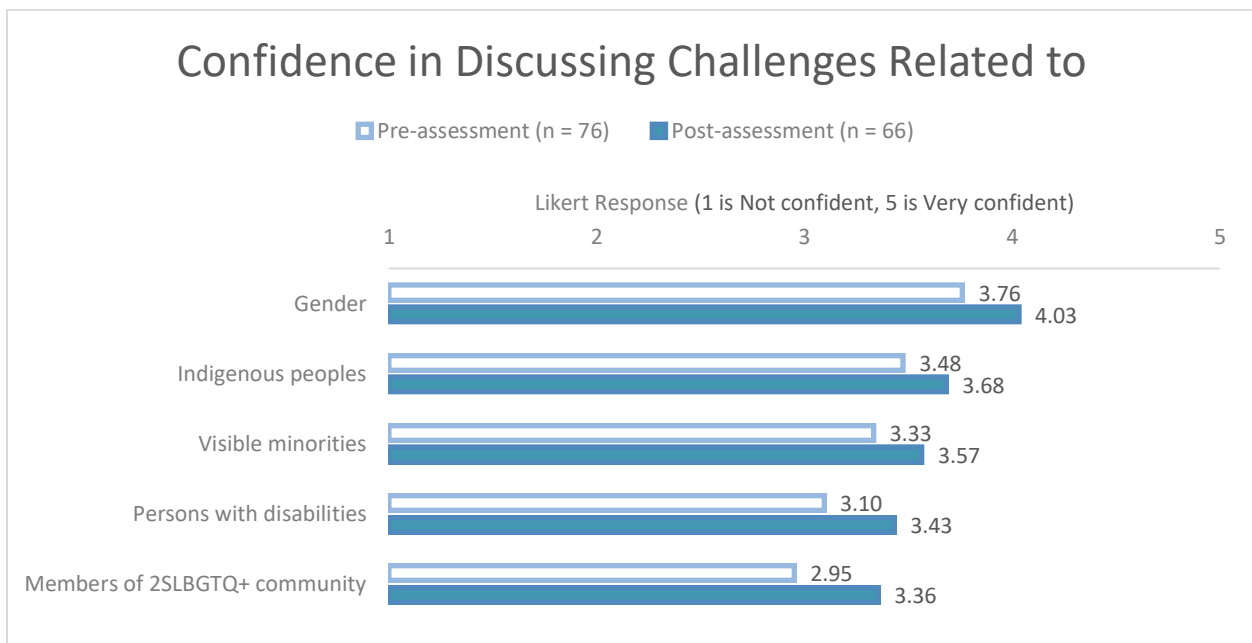


Figure 6-6: Confidence in Discussing Workplace Challenges

An essential behaviour in the support seeking phase involves the facilitating formal reporting of inequity incidents. In the DIGGER bystander intervention model, the final “R” stands for recording and reporting. As previous studies have indicated, there is a high rate of under-reporting of harmful biased behaviours in the mining industry (Peltier-Huntley, 2022; Rio Tinto & Elizabeth Broderick & Co., 2022). As shown in Figure 6-7, there were improvements between the average responses in the pre- and post-assessment surveys. The Wilcoxon sign-ranked test did not find these improvements were statistically significant ($p > 0.8$). The group that had the largest average improvement of 0.35 in their intentions to formally report was those

who had 2 or more marginalized aspects of identity. In contrast, the intentions to formally report for those with no marginalized aspects of identity decreased by an average of 0.21 if they witnessed an incident and by 0.16 if they were confided in by a peer/co-worker.

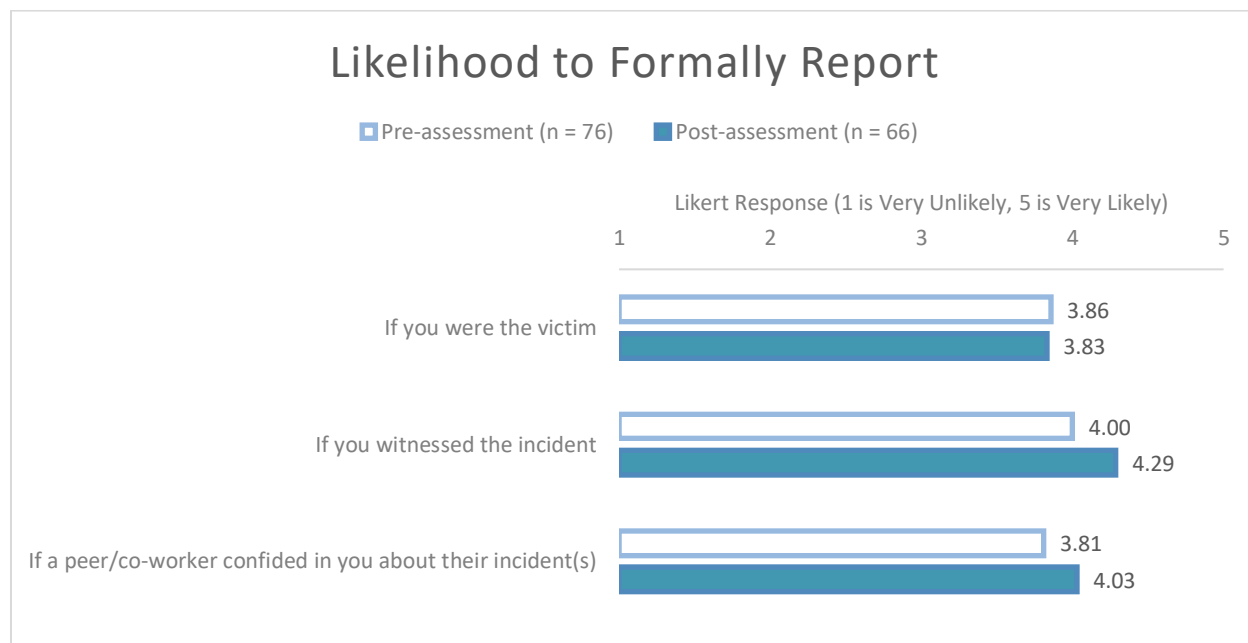


Figure 6-7: Likelihood to Formally Report

Our findings from the support-seeking stage are promising, in that participants indicated practicing their active listening skills both during and following the course. Coupling these findings with the significant improvements in understanding foundational EDI language and increased confidence in discussing challenges faced by equity-deserving groups, will support potential allies with future opportunities to offer support to those from marginalized groups. Finally, the marginal improvement in the intent to formally report indicate further organizational training may be needed to ensure that formal reporting systems are understood and accessible to employees and supported by leaders.

6.3.4 Realizing

The realizing stage includes both self-reflection and expanding one’s knowledge. As participants entered the realizing stage, they also expanded their vocabulary to include secondary EDI concepts of human rights, psychological safety, privilege, and allyship. Participants completed a comparative timeline exercise to learn about the history and experiences of those from marginalized groups in Canada. Next, participants practiced self-reflection by exploring

their sense of identity — including ways in which they may be privileged or marginalized — and the ways this may have influenced their knowledge and experiences. Throughout the realizing phase participants experienced the value of progressing on their allyship journey with a community of potential allies in their group discussions.

To engage in supporting others, active allies need to deepen their understanding on social topics. As shown in Figure 6-8, participants’ understanding of secondary EDI terms significantly improved between pre- and post-assessment. Additionally, the improvements in understanding human rights ($Z = -2.28, p = 0.02$), psychological safety ($Z = -2.93, p = 0.003$), privilege ($Z = -3.54, p = 0.001$), and allyship ($Z = -5.62, p < 0.001$) were found to be statistically significant using the Wilcoxon signed-rank test.

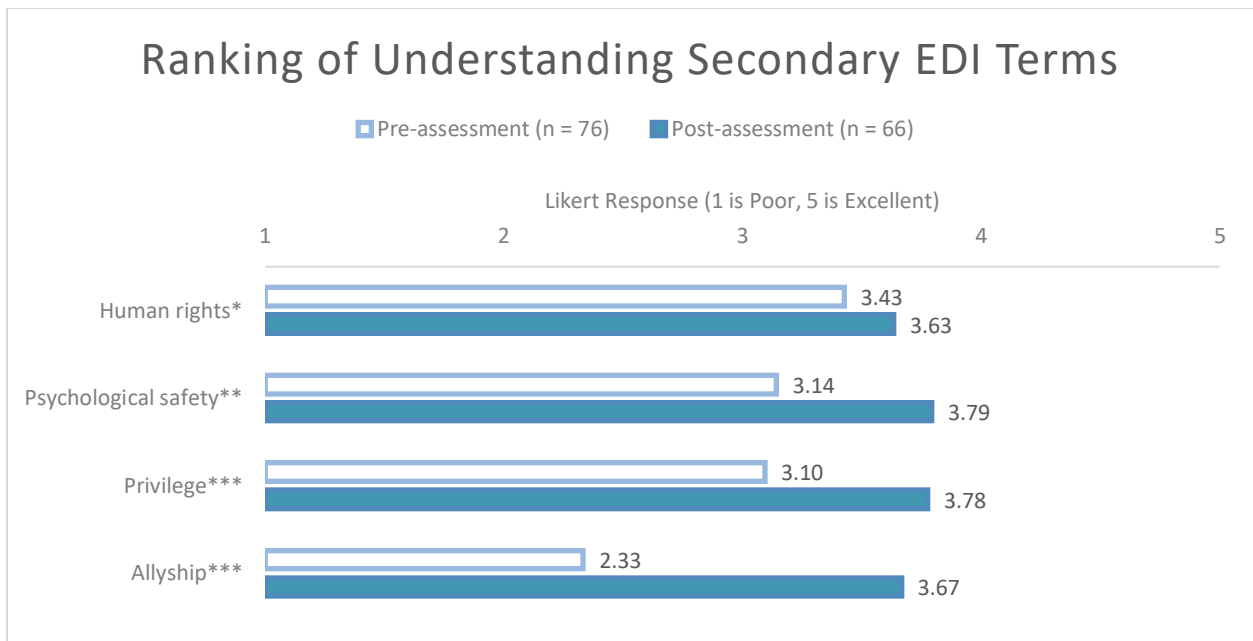


Figure 6-8: Understanding Secondary EDI Terms

In analyzing the responses to the above questions using the disaggregated demographic data there were found to be significant difference in how groups responded. Those with no marginalized aspects of identity improved their understanding of allyship by an average of 0.9 on the 5-point Likert scale compared to 0.8 for those with 1 or more aspects of marginalized identity, and an average improvement of 1.0 for those with 2 or more aspects of marginalized identity. One participant reflected that,

Allyship is a life-long commitment to learn and support all people in our efforts to bring a higher level of diversity and inclusion into our lives. It is being aware of the additional challenges faced by others and providing additional support to welcome others and ensure others have a fair opportunity to succeed and be their true selves.

Additionally, another participant noted that the course was impactful to their allyship practice because “there was a point where (they) realized that our group of people from diverse backgrounds was united in a shared sense of empathy and a willingness to improve the world for everyone.” This sense of having a community working towards a common goal supported and encouraged participants to stay engaged in the course even when they had many competing work priorities requiring their attention.

Many participants credited the course with piquing their interest to continue to learn about the experiences, history, and challenges faced by women, Indigenous peoples, visible minorities, persons with disabilities, and the 2SLGBTQIA+ community. Participants indicated a higher interest in seeking out opportunities to learn about the history or experiences of others following the course ($Z = -0.06, p = 0.9$) and indicated a more focused effort on which groups they would learn about. Participants were most interested in learning about the histories and experiences of Indigenous peoples both before and after the course. To support their continued learning some participants committed to reading, listening to podcasts, and engaging with their organization’s employee resource groups. One participant’s learning focus was specific to their location and how they would apply the learning to their work environment: “I have made steps to begin to get a better understanding of the Dene and Cree people in northern Saskatchewan. With this understanding, I can better work to support their needs in the workplace.”

Additionally, many participants commented on their responsibility as people leaders to support others in their learning by sharing knowledge they had learned from the Active Allies course. Participants were planning to share EDI related information through toolbox talks, mentoring and coaching others with their allyship practices. Additionally, a few participants requested that the Active Allies course be allowed to continue beyond the study so that they could continue to learn with their peers in other organizations.

In addition to the allyship behaviours of learning and engaging with others, part of the realizing phase involves the inward work of self-reflection. In the Active Allies course

participants were encouraged to reflect on their own intersectional identity. The purpose of this exercise was to consider ways in which they may be privileged in order to identify opportunities to support those who may be more marginalized. As shown in Figure 6-9, participants were asked a series of questions to understand their beliefs in privilege, equity, and their own positionality about ways in which they may be privileged or marginalized; the Wilcoxon signed-rank test found that these increases between the pre- and post-assessment were not significant ($p > 0.1$). Participants articulated how at times they experienced privilege or marginalization. One participant shared that:

Being a woman [in mining] is both an advantage and disadvantage. Lots of times people don't understand how difficult it is being the only woman working underground and how inconvenient it can be to have a bathroom a kilometre away from my work area and only being able to walk to get to it. Or how I'm discriminated against for being a woman. Sometimes people assume I can't do something so they do it for me I guess it can be an advantage sometimes.

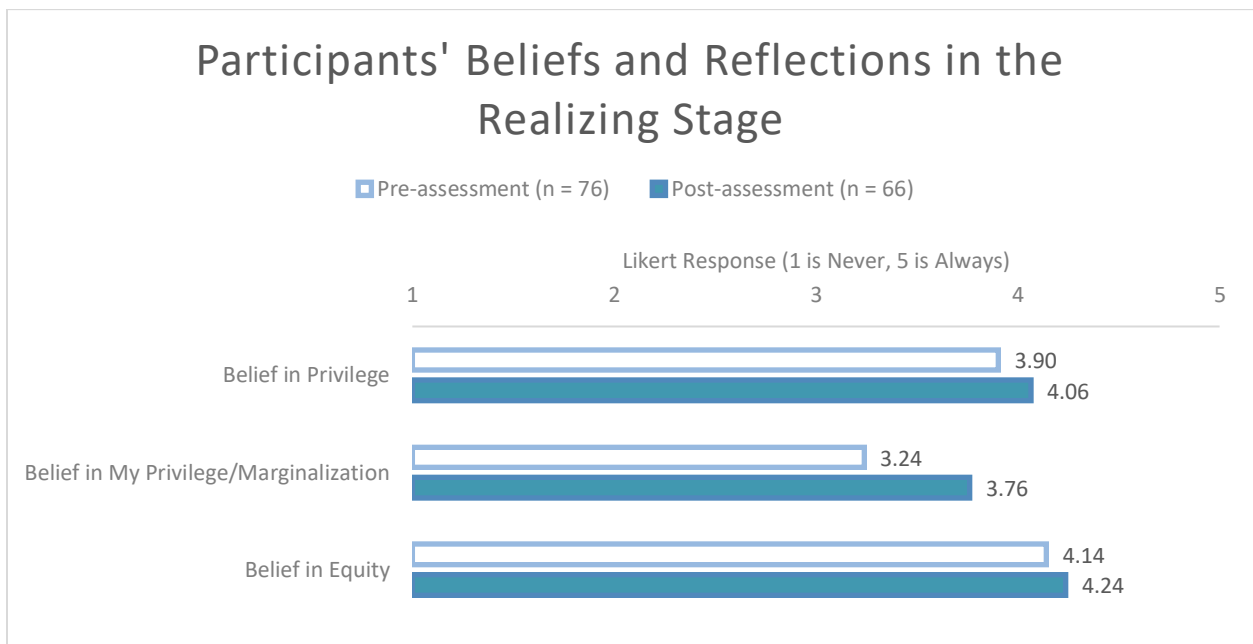


Figure 6-9: Participants' Beliefs and Reflections in the Realizing Stage

As part of self-reflection and learning throughout the course, some participants who had previously witnessed or experienced workplace discrimination or harassment had the opportunity

to process the impact that these negative experiences had on them. As shown in Figure 6-10, participants understanding of how these past incidents impacted their understanding of themselves, their environment, and how they fit in their environment improved due to the Active Allies course. While these improvements were not found to be statistically significant using the Wilcoxon signed-rank test ($p > 0.3$), we did find that those with no marginalized aspects of identities experienced the largest average increases (0.33) to these three questions, compared to no increase with those with one or more marginalized aspect of identity. Prior to the course, one participant described how they did not feel supported to report a discrimination and harassment incident and “felt like the girl who cried wolf and I was an inconvenience.” Following the course, a participant shared that the course “helped me understand that I was not the problem, the harasser was.” Additionally, participants’ realizing moments helped them to put what had happened to them into context. As one participant reflected:

It helped me to see that I was not alone in experiencing this kind of thing. That is both reassuring and deeply disturbing. It reinforced my belief that when any system presents a significant imbalance of social power between individuals, those with the advantage can and often will use that imbalance as a weapon.

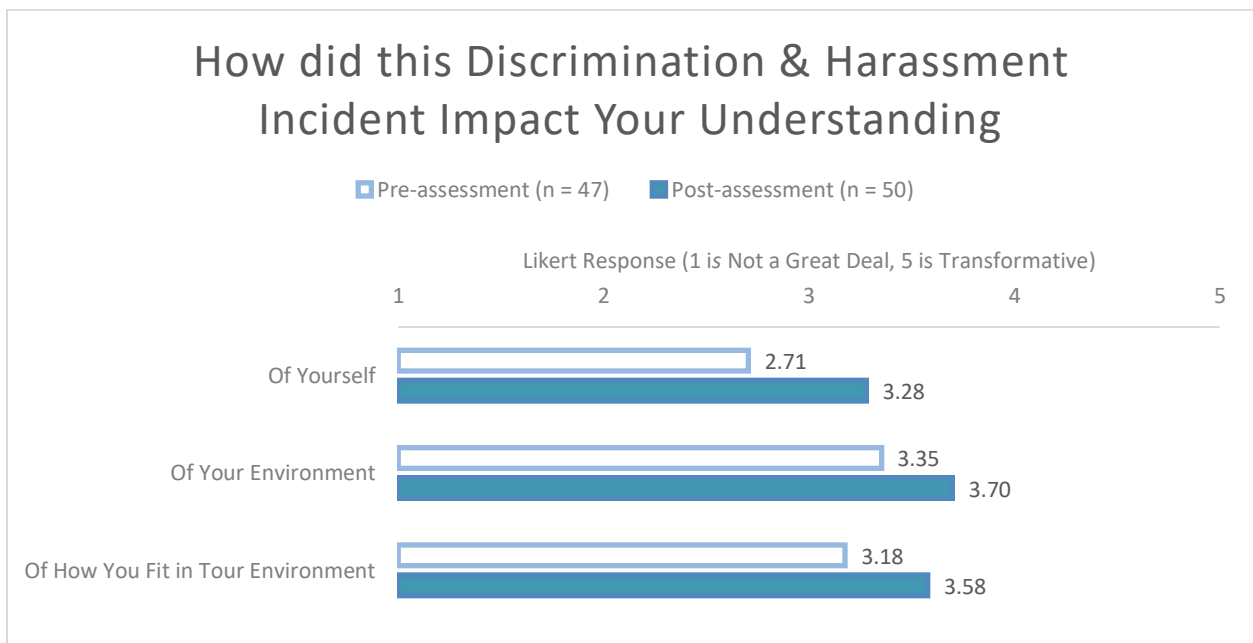


Figure 6-10: Processing of Discrimination and Harassment Incidents

Throughout the Active Allies course when engaging in outward learning to better understand the historical context of Canadian society or the inward learning involved with self-reflection, participants were also engaging with their peers in weekly group discussions. The weekly group discussions were structured by facilitators to be primarily peer led discussions. As one participant shared, the “most impactful [part of Active Allies course] was the group discussions. While the topics to be studied every week were the conversation, it was interesting to hear others’ perceptions or learnings from the topics and gain new perspectives.” Additionally, another participant felt the content from the Active Allies course provided them the “education piece to feel comfortable enough in my knowledge to have discussions with others.” To effectively engage in the group discussion participants benefited from the common, foundational elements offered through the Active Allies course content.

6.3.5 Active Allyship

To assess whether the Active Allies training will transfer into active allyship in the workplace we examined several sustainability factors to understand motivation, beliefs, knowledge, and skills, and to check for any lingering resistance to concepts such as equity. Additionally, to understand allyship intentions, researchers asked participants to describe allyship and their connection to EDI before and after the training. Lastly, participants were asked to describe and share examples of their allyship actions and plans for continued practice following the course.

As a result of the Active Allies course, 48 of 66 (73%) participants indicated having more candid conversations about inequities since taking the course. Thematic analysis revealed that participants are most commonly having these discussions with their *peers* (n = 14), their *supervisors or leaders* (n = 9), their *direct reports* (n = 4), or their *friends and family* (n = 7). One participant shared that “I talked with my team about the difference between being an ally and an active ally and how important it is to be active and speak out against offensive behavior/comments.” Additionally, another participant felt motivated to continue their allyship practice after “seeing people in management positions taking this course seriously to pass knowledge down to their employees”.

As shown in Figure 6-11, the importance of advancing equity for each of the five equity-deserving groups increased between the pre- and post-assessment surveys. Although participants showed the highest increase with beliefs to advance equity for the 2SLGBTQIA+ community (Z

= -1.89, $p = 0.06$) and visible minorities ($Z = -2.04, p = 0.04$), the Wilcoxon signed-rank test did not find these improvements for the remaining groups to be significant ($p > 0.1$).

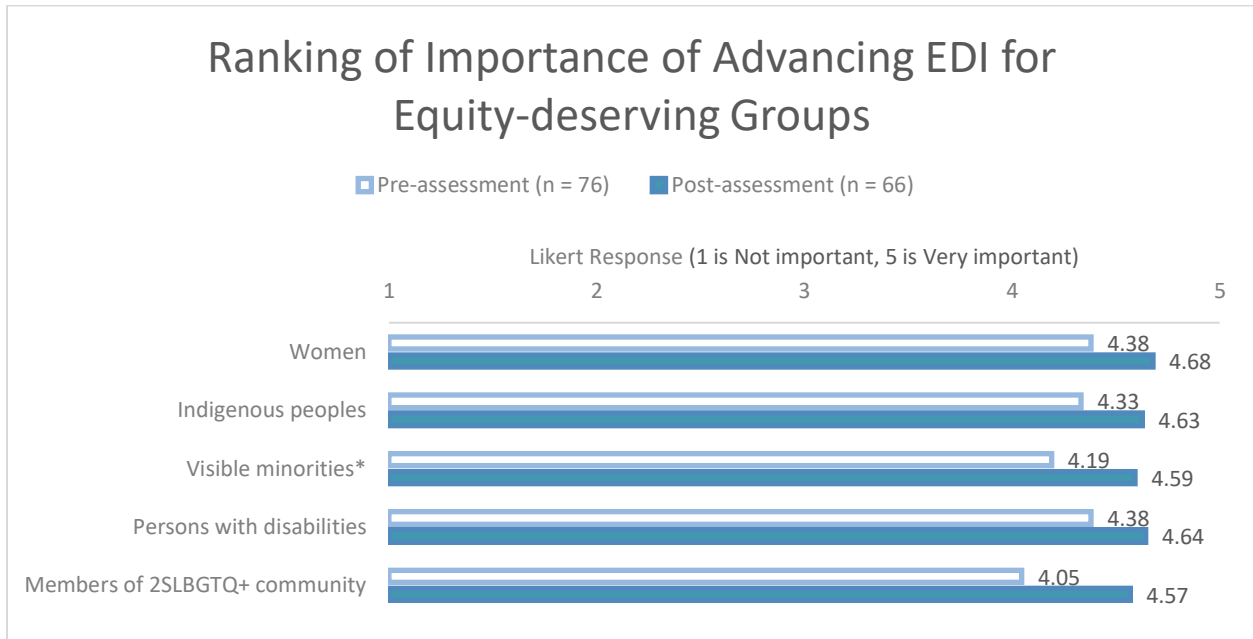


Figure 6-11: Importance of Advancing Equity for Equity-Deserving Groups

Participants were asked a series of questions to better understand how they might be moved to action — to act as active allies. As shown in Figure 6-12, participants’ average response to these questions on learning about others ($Z = -0.06, p = 0.1$), confidence in sharing ($Z = -3.42, p = 0.001$), and likelihood to share ($Z = -0.18, p = 0.9$) improved on a 5-point Likert scale between the pre- and post-assessments; however, only the improvements in confidence in sharing was found to be statistically significant with the Wilcoxon signed-rank test. Additionally, participants shared that their allyship related goals following the course were centered on *learning and listening* (n = 33) and *supporting others* (n = 22) — including speaking up about inequities, proactively supporting others, and volunteering.

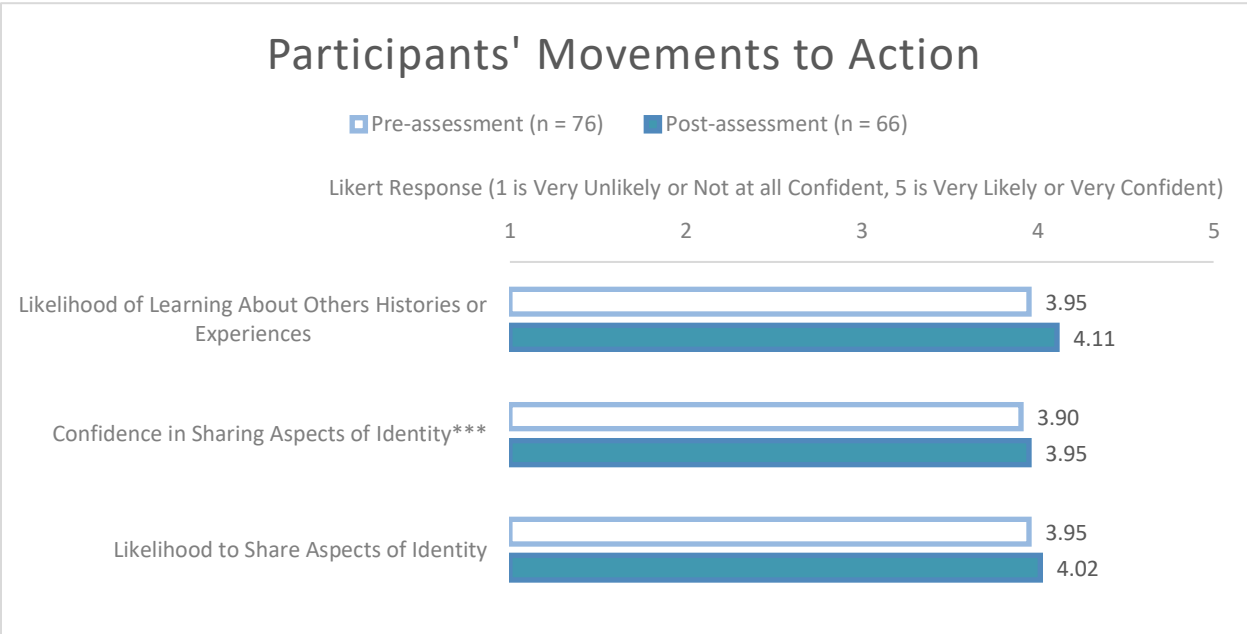


Figure 6-12: Participants’ Movements to Action

Following the course, participants were able to articulate more ways they were connected to EDI compared to prior to the course. As a result, participants had increased intentions to identifying themselves as workplace allies or allies within their communities. Additionally, participants’ understanding of allyship was broadened as a result of the Active Allies course. As one participant shared,

The Active Allies course really opened my eyes. I thought I was already a strong ally, however I quickly realized I had a long way to go. Now, I want to be an ally for others to support and help them, so we work to improve EDI in the workplace at all levels and positions.

Following the course the three most common themes resulting from how participants defined allyship were in *supporting equity-deserving groups* (n = 46), *listening to or looking out for others* (n = 25), and *holding others accountable about their biases* (n = 17).

Lastly, participants were asked to reflect on the roles and responsibilities of active allies. The resulting themes from this question indicate that allies are at times required to be proactive, *inclusive communicators* (n = 23) — as they engage in active listening, using inclusive language,

and apologizing to create safe spaces for others. At other times, participants recognized that they may be required to be reactive by identifying harmful biased behavior and *speaking up about inequities* (n = 25) through following the DIGGER bystander model. Additionally, at times they must *walk the talk* (n = 22) by being a combination of a proactive and reactive ally. *Walking the talk* included the support of an allyship ecosystem through intentionally modelling allyship competencies and supporting a cycle of continuous learning and knowledge sharing with their colleagues and direct reports.

To support their own allyship practice and nurture an allyship ecosystem, participants recognized the importance of their ongoing learning and engaging in conversations which reshape their workplace culture and systems. One participant noted that “There are policies in place to ensure diversity is addressed during hiring, but there is a long way to go to retain diverse groups after they are hired.” Another participant shared “I believe companies and people are trying to (for the most part) incorporate EDI principles into their actions and lives, but it is a long way from being intrinsic in all that we do.” Lastly, another participant’s insights indicate that:

Allyship is supporting those who do not have a voice or feel that they do not have a voice to bring forward concerns and to be heard. By giving everyone a voice and supporting all - we will grow a workplace that all are comfortable in. If we are comfortable - we will bring our whole self to work.

6.4 Discussion

6.4.1 Implications for Mining’s Allyship Ecosystems

6.4.1.1 Blended Learning to Meet Mining’s Unique Needs

The Active Allies course incorporated a blended learning format in that it combined asynchronous, e-learning content with synchronous group discussions. Bin Mubayrik (2018) highlights that despite the research lacking around blended learning there is a trend for employers to adopt a blended learning approach. In our study in the mining industry, a blended learning approach helped facilitate workplace learning around a multitude of constraints related to location and shift schedules as we formed virtual discussion groups around participants’ availability. Given the variety of shift schedules and mines located across Saskatchewan, the blended learning format was a necessity to engage 76 participants over a 3-month period. An unexpected aspect of the blended learning that we found that learners not only engaged with the

blended learning format but also benefited from the learning being facilitated across from multiple companies in the industry. This finding, which was reinforced in group discussions and participant's feedback on the course, indicates that blended learning not only appealed to a variety of learners and resulted in a psychologically safe learning environment. This psychologically safe environment allowed participants to learn about and discuss what can initially be uncomfortable or unfamiliar topics. In the previous phase of the study, we had also found that fostering a psychologically safe learning environment was essential to facilitating allyship training (Peltier-Huntley & Moazed, 2024). Lastly, blended learning between organizations poses potential technology challenges due to differences in IT policies, firewalls, and potential cyber-threats. Future training, especially cross-industry training, should test the accessibility of platforms and technology across multiple devices and locations and work closely with IT professionals to resolve any barriers or threats.

6.4.1.2 Bolstering Allyship Training Transfer

It is clear from the interest in the Active Allies course and the participants that completed it that the Canadian mining industry is progressing along its journey to advance EDI. Leaders have a large role to play in the transformation towards more inclusive and equitable workplaces (McKinsey & Company, 2021a; Peltier-Huntley, 2023) and organizations have a role to play in equipping their leaders to lead change. Workplace training on EDI topics is needed to bridge the gap in EDI competencies, support those in the industry with understanding their role and responsibilities operationalizing EDI, and ensure leaders act in alignment with organizational EDI strategies and policies.

Strategies to ensure the successful transfer of training principles to workplace application is therefore important. Researchers Dixit and Sinha (2022) provide a number of recommendations to support workplace training transfer, which we incorporated in the Active Allies course: providing reading material and videos in an e-learning format, facilitating learning discussion groups, and following up on training progress via the post-assessment survey. Additionally, Dixit and Sinha (2022) found that 1-on-1 coaching is a highly effective means to support successful transfer of training content; we did not incorporate 1-on-1 coaching into our study. Lastly, training transfer can be further supported through factors outside of the learning environment, which we call the allyship ecosystem. Dixit and Sinha (2022) recommendations to bolster the ecosystem include engaging leaders — which in the context of our study may help

with establishing further accountability to practicing workplace allyship and incorporating 1-on-1 coaching.

Continuous learning is an essential part of professional practice in mining. Building on De Souza and Schmader's (2022, 2024) concept of reactive and proactive allyship, the course content and learning activities allowed participants to define how they can engage in everyday inclusive behavior (reactive allyship) actions and establish a continuous learning plan (proactive allyship). Similarly, studies on gender and mining have recommended proactive allyship efforts, such as mentorship, work allocation, and pay equity to help retain women in the sector (Hughes, 2012; Women In Mining, 2010). In contrast to an over-emphasis on celebrating the success of individual women who persist in male-dominated workplaces, Howard (2022) calls for interventions which address "hostile environments", thereby recognizing the systemic nature of inequity. Additionally, to shift workplace cultures from being hostile to inclusive, potential allies must recognize the moment when they need to respond swiftly (Peltier-Huntley, 2023). Therefore, active workplace allies need to be reactive and proactive at times.

To support participants' behaving consistently to support those who are subject to inequity, we included bystander interventions in the course. Attribution theory considers the consistency with which potential allies may react in different situations (Kelley & Michela, 1980). In the Active Allies course, as suggested by Dover (2016), participants analyzed scenarios which required them to reflect on the systemic inequities and individual impacts of microaggressions. Our study found that by learning about and practicing Mine Shift's DIGGER intervention, participants' intentions to informally speak up when witnessing or being confided in about inequities increased. Bystander intervention training supports potential allies with the interpellation — a process occurring at the moment one becomes aware of a situation requiring action (As cited in Charland, 1987 from Althusser, 1971) — required to take a supportive (reactive) action following an incident of inequity. Furthermore, bystander intervention training has the potential to support attribution theory. However, like Watson (2021)'s findings on allyship intentions, the question remains how and if participants will choose to engage in allyship behavior in the moment. Further research, including a longitudinal study with participants who have taken allyship training, may help answer this research question.

Lastly, to bolster allyship training transfer, we need to consider how to embed the benefits of the course into workplace ecosystems and best support leaders. As argued by Peltier-Huntley

(2023), leaders play an essential role in ensuring the successful implementation and sustainability of allyship efforts. In our study, more than half of participants were leaders and as such were applying their learnings from the Active Allies course not only to their own practice of inclusion but were considering how to support inclusive practices in their subordinates and peers. With training transfer and continuous learning in mind, future workplace allyship training course could be further improved by including information not only about how and why one should develop their personal allyship practice, but in how leaders can and should support their direct reports and peers to sustain their own allyship practices. For example, organizations could create microlearning content which supports leaders in facilitating psychologically safe workplace EDI discussions.

6.4.1.3 Implications for Trauma-Informed Workplaces

Although not a primary focus of our study, our findings have implications on processing past workplace traumas, which we believe is novel. Trauma is an event or series of incidents which has negative, adverse effects on an individual (Greer, 2023). By learning about historical and ongoing challenges faced by equity-deserving groups, analysing workplace scenarios with harmful biased behaviours, and planning how they would intervene or act in future scenarios, participants transformed their understanding of their own experiences with workplace trauma. In doing this, participants reflected on failed allyship efforts and became motivated and skilled to do things differently going forward. Additionally, we heard from participants who had experienced past workplace traumas on the importance of the Active Allies course in viewing what happened to them through a different lens, perhaps allowing them to move on in their healing.

Future allyship training could purposefully adopt a trauma-informed approach. A trauma-informed approach “incorporates awareness of trauma and its impact across all aspects of organizational functioning, and is reflected in certain general principles (i.e., ensuring physical and psychological safety)” (Bargeman et al., 2021, p. 4). Furthermore, Greer (2023) states, that “an event that seems traumatic to on individual may not have the same adverse effects on others who experienced the same incident” (p. 1). Because what may trigger a response in one person may not be trigger a similar response in another, organizations should adopt an approach which considers the “safety, trust, collaboration and empowerment” (As cited in Lauridsen & Munkejord, 2022, p. 2 from Levenson, 2017) of everyone. As trauma-informed practices has

been under-researched outside of clinical settings (Greer, 2023), including the mining industry, further research is required. Additionally, future research should examine trauma-informed practices which support complex trauma, since employees may experience multiple traumatic events over their lifetime (Najmabadi et al., 2023).

In light of the high prevalence of those from rural and remote communities who are employed in mining and the desire to hire more Indigenous and women employees, for example, future allyship interventions should be broadened to support any past trauma, including due to residential schools and instances of sexual and domestic violence (Umereweneza et al., 2020). In light of our findings on workplace trauma, we recommend further research be conducted about how future workplace allyship training can best support employees who have previously experienced any form of trauma by incorporating reflective and restorative professional practices currently being studied in the health care sector (Lauridsen & Munkejord, 2022).

6.4.2 Study Limitation and Direction for Future Research

Our study was conducted primarily with participants who are connected to the Saskatchewan mining industry; however, the findings on workplace allyship may be applicable to other mining jurisdictions or other Canadian workplaces beyond the natural resource sector.

Due to this work being part of a Ph.D. study, the post-assessment surveys were completed four to eight weeks following the end of the training. Implications from Project RISE, which is part of the Engendering Success in STEM project, indicate that men who are allies in STEM may need more time to hit their stride — up to 20 months — with developing their allyship practice, compared to women — who adopted new behaviors in as little as 2 weeks post-training (Aday et al., 2022a). We recommend, future research incorporate longitudinal methods to examine allyship practices over longer periods of time. Additionally, building on the social psychology concept of EDI interventions as social vaccines (Dasgupta, 2011; Dennehy & Dasgupta, 2017), future research should examine what allyship ecosystem factors are most effective in sustaining allyship behaviors in workplaces.

6.5 Conclusion

In this study, we examined how a workplace EDI training intervention called Active Allies can be used to encourage participants in the Canadian mining industry to develop an ongoing practice of inclusion or allyship. EDI training is needed, especially for leaders, to help organizations with transforming their workplaces to attract and retain a diverse workforce. A

diverse workforce, which better reflects the communities in and around mining, is needed to bolster innovations needed to support our society in the global energy transition. Our findings indicate that:

1. Organizational EDI strategies may motivate and contribute to sustained activation of workplace allyship.
2. The largest improvements from pre- to post-training are related to increased understanding of and confidence in using EDI language.
3. Cross-industry training — with a combination of course content and related group discussion — supports psychologically safe EDI learning and allyship competency development.
4. Future EDI training should focus on equipping leaders to be trauma informed to best support and retain a diverse workforce which may have past experiences of trauma.

In the spirit of leading change, we encourage you to be curious, collaborative, confident, and humble in pursuing your own allyship practice and supporting allyship competencies in others.

7 Discussion and Conclusion

7.1 Contributions to the Literature and Implications for EDI Researchers

7.1.1 Broadening the Understanding of Workplace Allyship

My first contribution to the literature is to deepen the understanding of the phenomena of workplace allyship in the Canadian context, while recognizing that language and human rights statutes are contextual and ever changing. My findings have implications for what allyship is, what we call inclusive practices, and how we communicate the complexities of allyship. I define workplace allyship as a practice of inclusion where — through listening, learning, and reflection on personal experiences and privileges — people actively support historically marginalized persons and communities in achieving their full potential.

In the early phases of my research, I wondered if “allyship” was the right term to describe inclusive practices. The behaviours, skills, and competencies I associated with allyship overlap with the related concepts of “advocacy”, “acting as an accomplice”, “acting in solidarity”, and “acting as a bridge”. Throughout the various phases of this study, I found that the concept of allyship was initially not well understood by potential allies, yet they were still curious enough to participate in a study about allyship. Similarly, other researchers have found that allyship is often aspirational rather than tangible and have worked to better define what allies do or avoid doing (Ansbach, 2020; Brown, 2020; Chong & Mohr, 2020). Because of our unconscious biases, allyship is often easier to recognize in others and can be dangerous, or seen as performative, when applied with a self-adhesive label (Bourke, 2020; Carlson et al., 2019). Despite the nuances of allyship, the term “allyship” seemed to connect with and motivate participants in our studies who are called to make their workplaces more inclusive, diverse, and equitable. Despite the variety of terms we could use to support and inspire inclusive practices, I believe “allyship” is perhaps one that can help call in those not already part of the conversation around advancing EDI.

To inspire and support potential allies we also need to communicate what allyship is and how to do it. Communicating about allyship and advancing EDI from the perspective of a diverse group of allies and with the road map of the Ally Activation model uses a rhetorical strategy which considered a balance of ethos (credibility), logos (message), and pathos (emotion). My rhetorical intentions are in line with Ken Baake’s reflection that researchers should extend “the meaning and implication of complexity ... well beyond science think-tanks into every facet of

society” (2003, p. 215). Furthermore, my intention to connect allyship with being purposefully inclusive is a rhetorical strategy to encourage and motivate potential allies to be mindful about how their actions, decisions, and comments can be seen as inclusive or not. My inspiration for this strategy is based largely on Kendi (2019)’s dichotomy that you can either be racist or anti-racist in your actions, intentions, or through your silence. Additionally, I found that De Souza and Schmader’s (2022, 2024) distinction between reactive and proactive allyship supports potential allies with identifying ways in which they can act as allies. Finally, our findings in the fourth phase of the study indicate that at times allies — especially those who are leaders — may need to be purposefully reactive or proactive allies, but also, at times they must dance between the two as they support others in their allyship practice. Leaders, with this added allyship focus must also consider the sustainability of the allyship ecosystem. A leaders’ focus needs to at times narrow in and at other times broaden, to evaluate how the entire allyship ecosystem and all of its parts are functioning.

7.1.2 Ally Activation Change Model

My next contribution to the literature is the rhetorical strategy articulated in the development of the Ally Activation model. The model can be used to describe journeying from a state of unawareness to leading social change. As outlined in Mezirow’s Transformational Learning Theory, ally activation requires a “disorienting dilemma” to trigger a potential ally to begin a journey which may involve strong emotions, self-reflection, reflective discourse, practicing new skills, developing competencies, and practical application within one’s life (Fleming, 2018; Karakou & Karalis, 2024; Mezirow, 2000). The Ally Activation Model can be used by researchers as they consider interventions to help support leading social change and is also a guide for those pursuing their own allyship practice. Throughout the study the model was found to be effective at summarizing what individuals may experience or feel, how they may interact with others, and what allyship competencies are required at each stage. These distinctions can help with planning and refining interventions to support personal, interpersonal, and organizational changes (Haine-Bennett et al., 2020). A few participants in Phases 3 and 4 told us they found the Ally Activation model a handy map for their journey ahead. This framework can be used from the perspective of someone with marginalized aspects of identity or someone who may have many aspects of privilege to identify the behaviours, skills, and knowledge they must acquire to intentionally support others in their workplace.

7.1.3 Adopting a Broad Intersectional Approach to Allyship

My third contribution was in taking a broad, intersectional approach to allyship. To my knowledge this study is one of the first instances of adopting a broad approach which incorporates five distinct marginalized groups. Additionally, our findings in Phases 2, 3, and 4 show that a broad approach can also incorporate and be complementary to Truth and Reconciliation efforts. Findings from Phases 3 and 4 show that taking a broad approach may reduce the risk of backlash in potential allies compared to focusing on one aspect of identity, such as gender. As participants in the Active Allies course engaged with the five human rights timelines, they recognized the systemic nature of inequities that have persisted in Canadian society and the injustice in legislation that treated people negatively and differentially due to aspects of their identities. I believe that seeing this repeating pattern of systemic inequity — when combined with self-reflection on one’s own power and privilege — holds the potential to support people in overcoming a resistance to the concept of equity or at least in motivating individuals to adopt an allyship practice. Important in the context of Canada, our findings show that a broad approach to EDI is also complementary to Truth and Reconciliation efforts; and that Truth and Reconciliation can be an antecedent for a broader allyship practice. Additionally, our findings from phases 3 and 4 show that taking a broad approach to EDI may reduce the risk of backlash in potential allies compared to focusing on a single aspect of identity, such as gender.

Finally, my intersectional approach to evaluating allyship allowed for us to analyze groups of people based on the number of marginalized aspects of their identity and make the distinction of who has potential to be a universal ally. The call for an intersectional approach in advancing EDI has been recommended by many researchers (Campero et al., 2023; Carter et al., 2024; Haine-Bennett et al., 2020; Hill Collins, 2019); however, an intersectional approach in research is often limited to one intersection (Campero et al., 2023; Hock et al., 2024). I define universal allies as those with no identified aspect of marginalized identity who can act as an ally for many different marginalized groups. I recommend that this approach to analyzing inclusion efforts cautiously be used by researchers and EDI practitioners to evaluate differences in people’s experiences and perceptions on EDI topics to shape rhetorical practices. I emphasize this caution with the humble recognition that demographic data may be imperfect due to how we ask participants about their identities and a lack of trust or knowledge with which participants

respond. Additionally, I recognize that language used to describe identities and marginalized groups is contextual, can be based on individuals' preferences, and continues to evolve.

7.1.4 Strategies to Address EDI Backlash

Findings from my study have communication and practical applications for reducing potential backlash to workplace equity, diversity, and inclusion efforts. Throughout discussions with nearly 120 participants in Phases 2, 3, and 4, I observed that participants, prior to any interventions, tended to have the strongest understanding of diversity. I believe this is due to the prevalence of demographic information that quantitatively describes the gaps in representation whether that be in employment overall, or at different levels of leadership to which participants had already been exposed. Simply put; to overcome diversity denial, we can communicate what representation gaps looks like in an organization, industry, or profession relative to the population. Furthermore, defining what the current state of diversity is compared to local population has been a rhetorical strategy used in many EDI business cases (Campero et al., 2023; McKinsey Global Institute, 2017)

Next, I observed that participants gained an understanding of inclusion, usually by recognizing instances of bias, discrimination, and harassment and the disproportionate negative impacts of bias on equity-deserving groups. This is also the first stage (awareness) on the Ally Activation model. To overcome the denial of the need for inclusion we need to be exposed to the lived experiences of those who have faced these challenges. In this study, we exposed participants to stories informed by individuals' lived experiences in the Active Allies course content and encouraged further sharing of participants' lived experiences in the group discussions. Learning of the lived experiences of those from marginalized groups is frequently cited as a recommendation to advance EDI (Aday et al., 2022a; Akam et al., 2021). While awareness biases are an essential part of practicing inclusion, it is not enough to be aware. As was found from the Engendering Success in STEM consortium, bias is pervasive and not easily overcome (Aday et al., 2022a).

The third and potentially most dangerous area of backlash is in denying the need for equity. In the absence of supporting equity, organizations and individuals cannot move onto the important work of changing systems and achieving justice (Fältholm & Norberg, 2017). For those that feel they may have experienced reverse discrimination because a "less qualified" candidate was chosen over themselves, their resentment may hold them back from practicing

inclusion; however, they may actually be stuck on the concept of equity. The denial of a need for equity is strongly coupled with a belief in meritocracy (Kaplan, 2015; King, 2022; UN Women National Committee Australia, 2015). Additionally, to dismantle one's belief in meritocracy requires introspection; it requires potential allies to deeply reflect on their own privilege, power, and values and to recognize how they have personally benefited from unearned advantages (Amaechi, 2020; Nixon, 2019; Warren & Warren, 2021). Overcoming equity-denial requires analyzing the institutions that we are a part of and recognizing how they may be unjust and upholding systemic barriers (Rio Tinto & Elizabeth Broderick & Co., 2022). Overcoming this denial is most important and likely most challenging for those in leadership roles, as they have benefited the most from the existing systems (UN Women National Committee Australia, 2015). While learning about systemic instances of marginalization and intersectionality may help with peeling back some layers of protection around the core belief many have in meritocracy, participants are unlikely to give up their denial of inequity without developing their abilities to self-reflect on their own power and privileges (Brown, 2020; Carlson et al., 2019; Mulik & Gawali, 2023). Our findings from Phases 3 and 4 show that those in the majority group did have a marked shift in their understanding of EDI concepts and were able to identify how they could use their privilege to act as workplace allies. However, we also had one participant who in the post-assessment expressed opinions which denied the need for equity. Future research should focus allyship efforts on which self-reflection exercises are most effective at overcoming the denial of the need for equity and justice. Additionally, future research should consider how best to equip EDI practitioners with rhetorical strategies that are the most effective for overcoming concerns with "reverse-discrimination", i.e. reverse-racism, reverse-sexism, etc.

7.2 Practical Implications for EDI Practitioners

7.2.1 EDI Training Motivations

The Active Allies training proved to be effective for engaging a broad range of people in learning and developing skills needed to support an EDI ecosystem. While the motivations for participants to join the study varied slightly between Phases 3 and 4, in both cases, participants seemed interested to expand their knowledge and better understand how they could contribute to a more equitable, diverse, and inclusive environment. When considering motivation to initiate or continue an allyship practice, a practical implication, for those leading these training efforts is adopt a broad approach to recruiting. There is no singular reason for people to be attracted to

allyship, instead, there are a variety of reasons which should be considered to attract participants to attend EDI training. Additionally, as we had reflected following on the trial of the Active Allies course in the Engineering College (Phase 3), repeated opportunities to take the course may help encourage additional participants. While I was aware of a few instances of referrals from past participants in the mining industry trial (Phase 4), I recognize that having a week between cohorts was perhaps insufficient to allow for all participants to follow through on their action plans, realize the benefits, and encourage their peers to participate, all while completing their regular duties.

7.2.2 Leading Change Without an Expert

EDI is an emerging field within many countries, including Canada. While there are a variety of training programs to support EDI practitioners in obtaining their skills, EDI practitioners are not a recognized or self-regulated profession in Canada. Because advancing EDI is inherently a wicked problem, an interdisciplinary approach is required to develop new solutions. As such, many of the EDI practitioners that I know or have learned from come to this work based on their own experiences with inequity and may have a variety of skills, approaches, and methods from disciplines such as law, policy, gender studies, psychology, and social science. I am sure many of them would say they are not an expert on anyone but themselves, and this is likely due to the investments they have made in self-reflection and/or therapy. Additionally, I suspect there is likely a shortage of EDI practitioners to lead the many change efforts required in Canadian workplaces. If we wait for more “experts” to lead the charge how many decades, how many generations will it take to close the gender gap? We cannot wait for experts or the perfect solution; instead, we need to proceed with the best practices and the best intentions to lead positive change.

EDI practitioners are often responsible for designing and facilitating EDI training and will no doubt hold it paramount to create a psychologically safe learning environment for all. Through my consulting company, I often see hesitancy in my clients to want to initially want to speak about EDI topics; they often feel they are not an “expert” and would prefer that “experts” lead these potentially dangerous conversations. Let the “experts” deal with the vocal minority who may be opposed to EDI. Rather than agreeing to always be the “expert”, I work to equip my clients with the language, skills, and confidence to lead these conversations. Yes, I am studying a

variety of topics related to EDI in male-dominated fields like engineering and mining, but no one person is an “expert”.

Similarly in the Active Allies training program, I tried to support participants with getting comfortable and confident with EDI language and skills and decenter myself as the “expert”. The peer support groups were purposefully designed to set up a psychologically safe environment and prevent reliance on facilitators being the “expert”. Many participants reached out after the first group discussion to let me know they needed more facilitation; they cannot do this on their own! Yet by the end of the course, these same people claimed the group discussions were a formative part of their experience but likely only because they had “a good group”. While my experiment with peer-led discussions was largely successful, I understand that having someone express vocal opposition against EDI in the group would likely have changed this outcome. I recommend future offerings of EDI training which utilize peer led discussion continue to ensure psychological safety by encouraging groups to create a set of rules for behaviour, allowing multiple channels for reporting concerns to course coordinators, and providing a peer-led facilitator guide to help keep discussions psychologically safe.

If we encourage change efforts without relying on “experts”, everyone can be equipped and motivated to do their part to practice inclusion. Each of us can work to build bridges across organizations rather than silos within them. We can share information and lessons learned about our change efforts and seek to continually make our language and approaches more inclusive. Researchers can collaborate with not-for-profits and EDI practitioners that are leading local change efforts. Because advancing EDI is a wicked problem — one that is dynamic and contextual, which cannot be solved by a single solution (Rittel & Webber, 1973) — we need to openly share and be encouraged to try new interventions which can have a lasting positive impact. We need an army of skilled, motivated change leaders who are equipped with best practices and the best intentions.

7.2.3 Trauma-Informed Leaders

As was found in Phase 4 of the study, some participants experienced validation of their past workplace trauma because of the Active Allies course. Unhealed trauma can result in long-term impacts; therefore, healing from past traumas is thought to be beneficial for people’s own well-being (Dennis et al., 2023). Healing from past traumas is necessary to ensure psychological safety and belonging in workplaces. Additionally, emerging research on clinical workers has

found the potential for negative health outcomes for those that offer support to trauma survivors (Fink-Samnack, 2022). Although the daily reality of workplace leaders in our study and those who support vulnerable populations is likely largely different, Greer (2023) argues non-clinical workplaces should adopt trauma-informed approaches. As workplaces across Canada seek to attract and retain a diverse and representative workforce, organizations may be unknowingly bringing in people who have faced instances of workplace or personal trauma. Policies and practices will need to evolve to support these individuals who have faced trauma so that everyone can achieve their full potential. Likewise, leaders, who may be trauma-uninformed, will need to become informed to best support those they lead to achieve their full potential. Leaders do not need to become experts on all forms of trauma, but they do need a level of awareness to notice when someone may be triggered or feeling unsafe, and to direct them to an appropriate support system.

7.3 Conclusion

In the multi-year Activating Allies study, I sought to understand the phenomena of allyship as a potential solution to address the wicked social problems associated with toxic workplace cultures which are often exclusive and sometimes traumatic to underrepresented, marginalized, and equity-deserving groups. With a recognition that to shift workplace culture to be inclusive, we need individuals to act as workplace allies who practice inclusion — and leaders — potential allies with role privilege — to recognize inequities and remove systemic barriers in line with the *Canadian Charter of Rights and Freedoms, Part I Constitution Act* (Canada, 1982). I sought to answer the question: how can we engage, train, and support everyone to act as “active allies”?

In summary, we can use strategies from a variety of disciplines such as rhetoric, law, policy, education, engineering, and sociology to engage, train, and support people to act as active allies. With proactive and purposeful education, we can engage people with a variety of lived experiences to reflect on and share their journey from a state of unawareness through to a state of leading change. Along the way potential allies are likely to have experience with seeking or offering support as a result of harmful biased behaviours — inequities that are commonly described as microaggressions, discrimination, or harassment. Additionally, they may go through a series of realizing moments as they learn from others and reflect on their own power, privileges, or aspects of marginalization. As a result of these realizing moments and processing of past experiences with inequities, potential allies will identify allyship skills to be developed

and gain confidence and charisma to speak up about injustices. As those who understand the systemic nature of inequity advance to a state of leading change, they may look for ways to change systems and embed sustainable solutions in workplace and societal ecosystems.

As my study was looking to address a wicked problem, I humbly recognize that there is no singular prescriptive answer on how to do this. I hope that by equipping potential allies — who may be at vastly different places in their understanding and support of social issues — with a variety of stories, ideas, and a common language they will take these seeds of knowledge and can go on to propagate change efforts in their own ecosystems. While we might not always get it right, we cannot wait for the right answer or the “experts” to close gender and other societal gaps. In line with the intentions behind the Charter, we all have a role to play in creating more inclusive and equitable organizations. As the adage goes, “the best time to plant a tree was 20 years ago, the next best time is now”. We can support everyone to feel valued, to achieve their full potential, and increase our likelihood of solving complex problems like climate change — through allyship. And the time to take the next step towards transformation is now.

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Appendix A Phase 3 and 4 Comparison

The following sets of figures compare findings from Phase 3 (Engineering College Pilot) and 4 (Mining Industry Pilot) data.

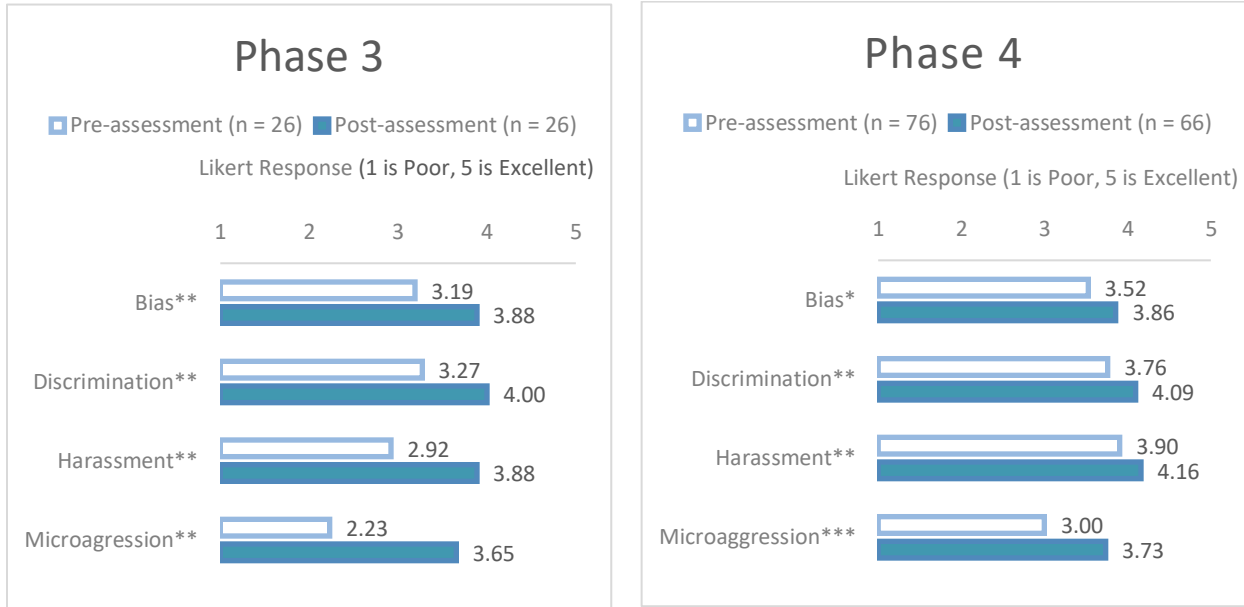


Figure A-1: Phase 3 and 4 Comparison of Ranking of Understanding of Inequity Terms

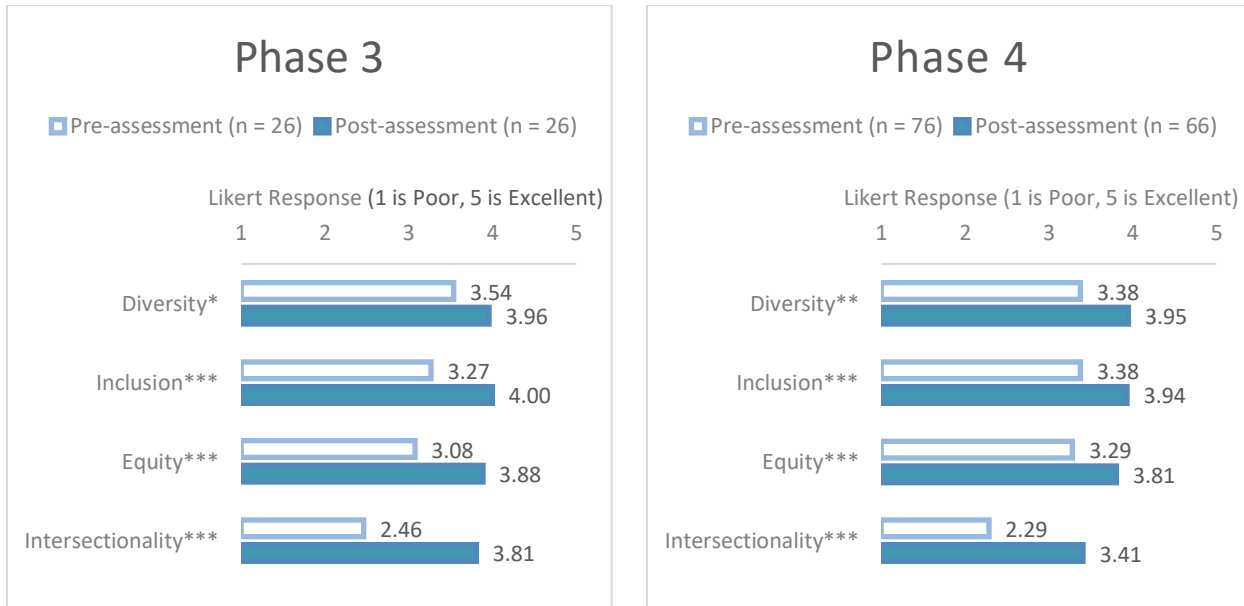


Figure A-2: Phase 3 and 4 Comparison of Ranking of Understanding of Foundational EDI Terms

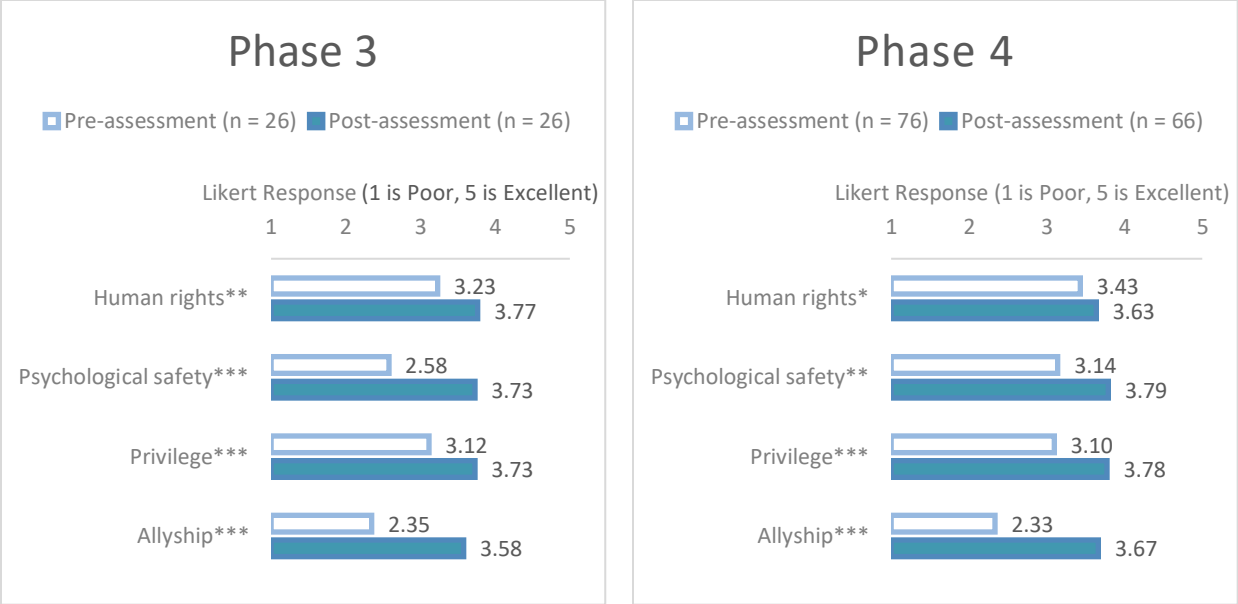


Figure A-3: Phase 3 and 4 Comparison of Ranking of Understanding of Secondary EDI Terms

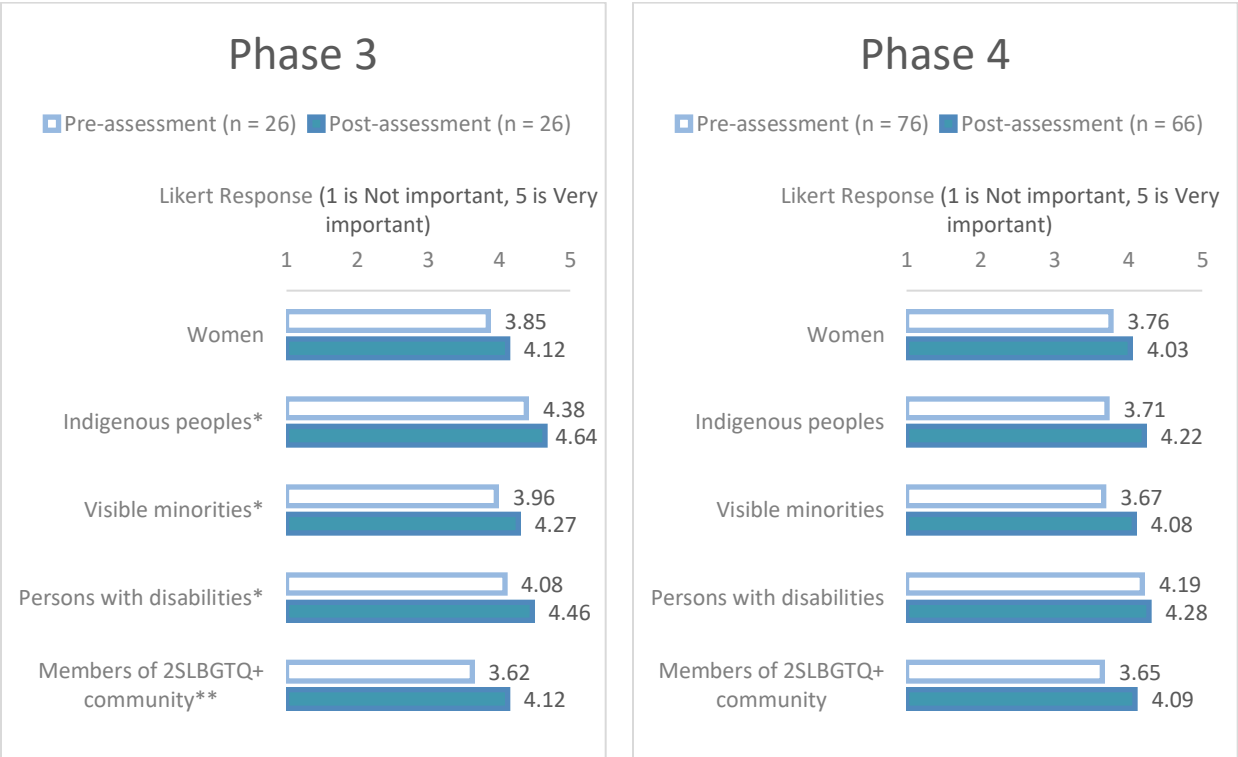


Figure A-4: Phase 3 and 4 Comparison of Belief in Likelihood of Inequities Being Experienced by Equity-Deserving Groups

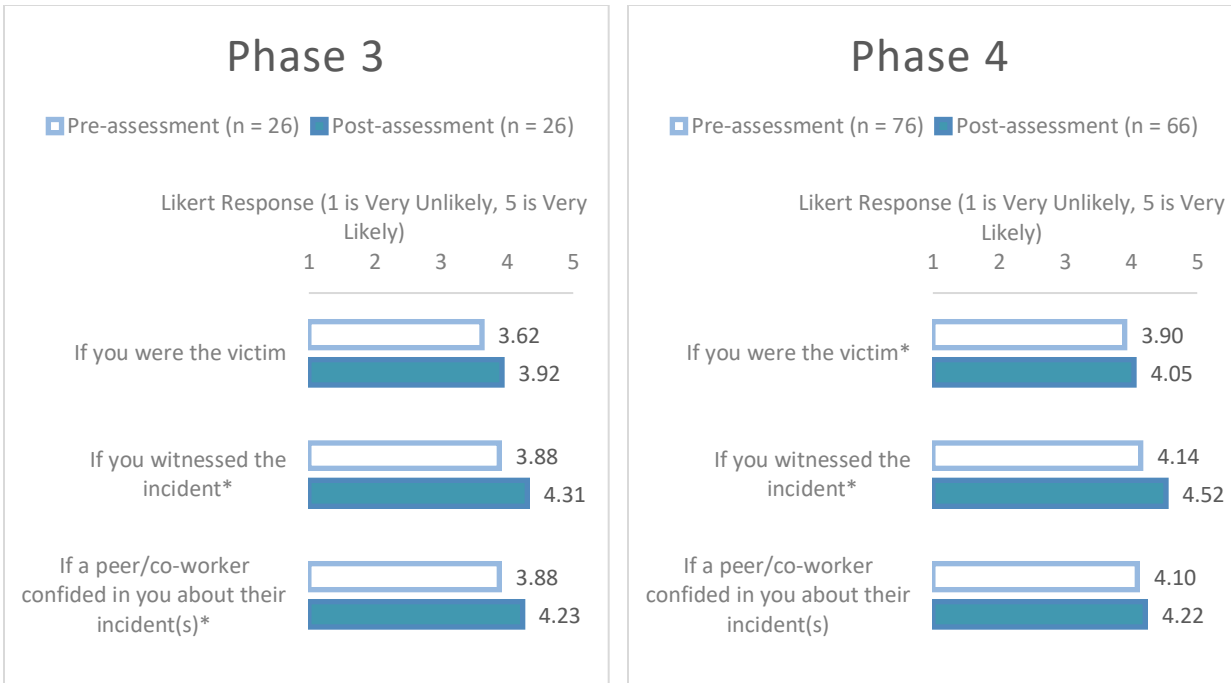


Figure A-5: Phase 3 and 4 Comparison of Likelihood to Informally Report

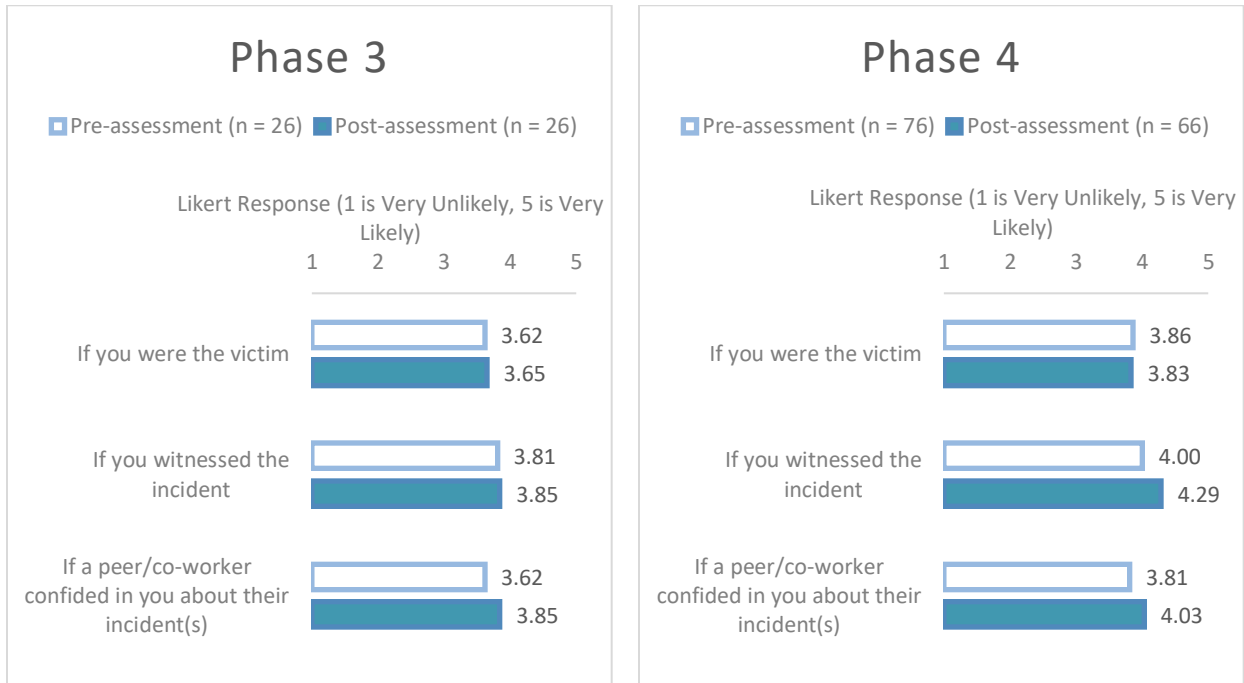


Figure A-6: Phase 3 and 4 Comparison of Likelihood to Formally Report