

QUEERING THE TECH ECOSYSTEM : BARRIERS AND OPPORTUNITIES RESEARCH REPORT

PART I - LITERATURE REVIEW

QUEERTECH

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EXECUTIVE SUMMARY

We set out to answer three core questions by reviewing academic research, news articles, reports and community-based publications, the results of which are summarized below:

- 1** The lived experiences of LGBTQ2S+ people working in the Canadian tech industry compared to their non-queer colleagues include stigmatisation, underrepresentation in STEM, exclusion, harassment in the workplace, less job satisfaction, greater employment/opportunity disparities, fewer resources and support, feeling less safe and welcome at work, less belongingness, and an overall lack of queer visibility, which is especially significant and disproportionate for TGNC people (transgender and gender nonconforming).
- 2** The tech industry could adapt its work culture to better recruit and retain members of these communities by adapting: institutional policies (e.g. partner with ally groups), actions of colleagues (e.g., normalise sharing pronouns, have out and accepted role models in senior management), policies for accountability and transparency (provide clear paths to progression and mobility within the organisation), and HR policies (e.g., amend gender binary on forms, expand health insurance to cover partners and support transition, raise the visibility for queer people in the workplace by matching queer employees to mentors).
- 3** Barriers that need to be eliminated and tools that can be implemented to do so include addressing the lack of queer mentors and role models, especially for queer people who are more alienated from STEM spaces, such as trans and Indigenous people. Solutions include creating leadership opportunities for queer people, supporting diverse role models, increasing visibility of queer issues, reducing pressure to separate professional and personal lives in STEM culture to foster disclosure. Another is that queer people often unaware or skeptical of organisational resources.

A possible solution is to include queer people when deciding which queer-friendly policies to adopt by consulting several diverse organisations, ensuring that the workforce is aware of policies by implementing measures in recruitment and reviews, and consistently demonstrating commitments.

Five main themes emerged from the review that interact to create a framework for understanding barriers and opportunities, as well as possibilities for implementing beneficial changes. These themes are: Belonging, Intersectionality, EDI (Equity, Diversity, and Inclusion) and HR policies, Cultural competence in STEM academia, and Navigating the workplace as a queer individual.

There is scarce data examining queer people's experiences in tech in Canada. Much of the Canadian literature focuses on the general queer workforce, not specific to tech. Some research shows that tech can be harnessed as an urban, inclusive space, and that by investing in inclusive practices and policies, the tech industry can better retain women, racial minorities, people with disabilities and queer people, and improve their work experiences. The process of conducting this review allowed us to highlight the importance and need for this research, the gaps that still exist, and the ways that they can be addressed. We will build on this literature review to further inform and validate our thesis. The forthcoming phases include surveys, interviews, and reports that will inform our future work at a strategic level to define and inform our priorities as an organisation at this intersection of LGBTQ2S+ and Tech.

CONTEXT: STATE OF QUEER WORKERS IN TECH

QueerTech is honoured to present this report on the challenges and opportunities for queer people working in tech. This report provides an overview and highlights of an extensive literature review which included academic sources as well as diverse non-academic reports and publications. Authored by an interdisciplinary and multisectorial team, it is an achievement in collaboration and an indicator of best practices.

This report presents the results of the first part of the project. The research was led by Dr. Robert-Paul Juster (Université de Montréal, Faculty of Medicine), supported by students at Université de Montréal and Concordia University, along with specialists from the Montreal-based consulting group imagine ideation.

Equity, Diversity & Belonging reports often show that real progress vis-à-vis inclusion and acceptance is slow. There is a demonstrated urgent need for organisations and institutions to take on the tasks of fighting discrimination and ensuring safe and supportive environments, while alleviating the burden queer people bear. There has to be a change in the approaches to understanding and working with underrepresented communities, in order to create inclusion within research and practice, and to give voices to distinct experiences.

QueerTech is proud to publish this condensed summary in an effort to see its results implemented in the workplace and bring benefits directly to people. Because it is a review of so much material, it has been broken down into three parts. This report first provides highlights of key findings about the Canadian context, then addresses the project's research questions, and finally provides a framework of the major themes and considerations from information available to us. QueerTech invites feedback and discussion in order to remain at the cutting edge of best practices. QueerTech strives to create opportunities to queer the tech ecosystem, making it a safe, inclusive, and innovative space for everyone.



THE BUSINESS CASE

Queer individuals face barriers and challenges in gaining employment in tech, resulting in their underrepresentation in the industry. Research on this issue has been sparse and incomplete. QueerTech took the initiative to co-design and conduct a three part research project, the results of which will help make a positive difference in the lives of Canadians and strengthen the economy.

A study done by the Kapor Center for Social Impact and Harris Poll (Scott et al., 2017), reports that Queer people working in the tech industry are among the most vulnerable, and this accounts for a significant portion of turnover for companies and organizations. According to a study commissioned by Telus, more than 55% of Queer people working in Canada do not find their workplaces to be inclusive. Moreover, the study found that 57% of respondents said they are not “fully out” at work, with 22% worried about a hostile work environment, 15% concerned about losing out on career opportunities, and 26% reluctant to apply for certain jobs because of how they identify (Van Stanvoort, 2016). Although efforts are being made to foster an all-embracing culture by many tech companies, the experiences of queer people working in tech and the specific barriers to long-term success standing in their way needs to be better understood.

Despite these challenges and identified problems, there is reason to be hopeful and determined to implement positive change.

The tech industry seems to have a better reputation than other STEM fields amongst potential queer employees (PwC and Out Leadership, 2019; Velinov, 2019). Due to its disruptive attitude towards traditional work environments, high pay, accommodating schedules, and emphasis on

innovation, the tech industry can be seen as a flexible and accessible space (Lopez, 2020; Wright, 2020). Tech’s ability to quantify skills may help create room for more diversity for people who can develop and show skills, potentially buffering against biases in hiring (Lynn, 2021; Velinov, 2019). Vocal tech firms have also helped boost the field’s inclusive reputation (Bennett, 2018). Queer people’s engagement and attachment to tech workspaces stems from their commitment, but there is also the possibility that tech harnesses something transformative (Steele, 2018).

RESEARCH QUESTIONS:

- What is the lived experience of Queer people working in Canada’s tech industry?
- How does the tech industry upgrade its work culture to better recruit and retain members of these communities?
- What barriers need to be eliminated, and what tools can be implemented to do so?

In summary, if equipped with proper approaches and measures, tech has the potential to be an empowering and liberating space for marginalized communities who have long been shunned from traditional STEM environments. It is our goal that this project will be a leading study among Queer Canadians working in the tech industry, and will help improve their conditions in the future.

KEY FINDINGS ABOUT QUEER TECH WORKERS IN CANADA

OVERVIEW OF FINDINGS

There is scarce data examining queer people's experiences in tech in Canada. Much of the Canadian literature focuses on the general queer workforce, not specific to tech. The following 10 points summarize the overall observations and conclusions of the literature review that we conducted. They include some of the specific key findings from some of those studies.

- 1 Queer people face discrimination and harassment across industries.
- 2 There are wage penalties for gay men and wage premiums for lesbian women, with the former working fewer and the latter more hours than heterosexual men and women (Waite et al., 2019; Appiah et al., 2021)
- 3 Bisexual individuals work the least hours, and earn less than their homosexual and straight counterparts (Waite et al., 2019; Appiah et al., 2021)
- 4 Organisational environments can help queer people integrate their sexual identities with the work place; and the levels of intolerance and stigma in these, and in city environments, impacts queer work-related migration (Waite et al., 2019)
- 5 In Canadian academia, there was a reported higher risk of experiencing workplace discrimination among women compared to men (20.1% vs 10.8%), people with disabilities compared to without disabilities (33.8% vs 13.9%), Indigenous people compared to non-Indigenous people (27.6% vs 15.1%) and queer people compared to non-queer people. (Hango, 2021)
- 6 While gay and lesbian faculty and researchers experienced greater discrimination than heterosexual faculty and researchers (21.6% vs 14.4%), bisexual and pansexual teaching staff reported discrimination twice as much as heterosexual faculty and researchers (29.8% vs 14.4%) (Hango, 2021)
- 7 38% of surveyed organisations did not have explicit gender identity and gender expression policies at work. Organisations neither had research-backed tools to assist employees in their transition journeys, such as allowing people to change their names and gender markers, having trained staff to handle such requests, and having a codified transition plans for employees, nor did they provide adequate health coverage for gender affirming medical procedures (Fosbrook, et al., 2020)
- 8 Queer Canadians are more likely than non-Queer Canadians to be living with a chronic health condition (29% vs 15%) or physical disability (12% vs 7%), which may affect their employment in various ways (Egale, 2020)
- 9 Queer workers report lower levels of general and mental health, along with higher levels of stress, food insecurity, and behaviours such as drinking and smoking, compared to their heterosexual counterparts (Appiah et al., 2021)
- 10 Two-Spirit and transgender individuals were most likely to have been denied employment and to have experienced harassment based on their sexual orientation or gender identity (Canadian Heritage, LGBTQ2S+ Secretariat, 2021)



INTERSECTIONALITY IN CANADA

Intersectionality emerges as a strong theme, with certain identities, such as physical disability, ethnicity, and gender, leading to poorer outcomes across the board (Egale, 2020).

Specific to tech, minorities, such as women BIPOC individuals, faced unique hurdles:

- Women and Indigenous people are underrepresented and along with visible minorities, they report lower levels of inclusion and belonging in tech and are paid less (Brookfield Institute, 2019).
- Women and black respondents reported lower levels of inclusion and belonging in their tech workplaces, and queer respondents, people with disabilities and Indigenous workers felt that specific barriers in the workplace kept that back from feeling included (MaRS, 2018).

SUMMARY

Despite these findings, there still remains a large gap in research in the Canadian context that captures the lived experiences of queer people in tech, the barriers they face, and the policies needed to support them.

- Some research shows that tech can be harnessed as an urban, inclusive space, and that by investing in inclusive practices and policies, the tech industry can better retain women, racial minorities, people with disabilities and queer people, and improve their work experiences (Canadian Venture Capital and Private Equity Association (CVCA) & BDC Capital, 2019).

There is a strong link between health and economic domains, with important policy implications.

- Key drivers of earning differences between queer and non-queer Canadians are: Industry, mental health status, labour supply, and demographic characteristics such as immigration status, race, and province of residence (Appiah et al., 2021).

What are the keys to closing the earnings gap and improving queer people's workplace experiences?

- Ensuring that policy responses confronting earnings disparities for sexual minorities address health and well-being in conjunction with focusing on economic and employment outcomes, all within the framework of intersectionality.
- Gaps in capital, experiences, and belongingness are especially acute for trans and gender nonconforming and Indigenous queer Canadians in the workforce, highlighting these communities as crucial targets for safety, belongingness, and equality interventions and policies (Canadian Heritage, LGBTQ2S+ Secretariat, 2021).

RESEARCH QUESTIONS SUMMARY: LIVED EXPERIENCES, TECH INDUSTRY ADAPTATIONS, BARRIERS AND TOOLS

1

WHAT IS THE LIVED EXPERIENCE OF LGBTQ2S+ PEOPLE WORKING IN THE CANADIAN TECH INDUSTRY?

Queer people are underrepresented in STEM, and face stigmatisation, exclusion, and moral and physical harassment in the workplace (Lloren et al., 2016, Freeman, 2020, Langin, 2021, Nelson, 2019; American Physical Society, 2014; Dice, 2018; Casper et al., 2020).

- Less job satisfaction; greater employment/opportunity disparities; fewer resources and support; less fostered success; more professional devaluation; fewer transparent evaluations; worse treatment and less respect; feeling less safe and welcome at work; less belongingness; exclusion from work events; less perceived fairness (Cech & Pham, 2017; Cech & Rothwell, 2020; Schnitzer & Fang, 2015; Freeman, 2020; Else, 2021; Langin, 2021; Cech & Waidzunas, 2021; Cech & Rothwell, 2018; Leman, 2018; Casper et al., 2020)
 - Queer people are more likely to consider leaving the field of STEM due to work stress related to minority status: experiencing career limitations, devaluation and marginalisation; institutional biases; and covert discrimination (Langin 2021, Suen & Chan, 2020; Cech & Rothwell, 2020; Stout & Wright, 2016; Cech & Waidzunas, 2021; Hughes 2018; Leman, 2018; Schnitzer & Fang, 2015; Cech & Rothwell; Vaccaro et al., 2021).
 - The interacting components of cisnormative heterosexism, misogyny, and racial dynamics create systematic and cultural barriers in the workplace that often compound for those that are multiply oppressed (Miller, et al., 2020; Matsuda, 2015; Casper, et al., 2020; Vaccaro et al., 2021): e.g. queer women and queer BIPOC more likely to face workplace discrimination, harassment, and devaluation; queer BIPOC have a harder time finding role models and connecting to their peers (Leman, 2018; Else, 2021; American Physical Society, 2014; Hango, 2021; Oberst, 2010; Kurzweil 2010).
- There is an overall lack of queer visibility in STEM research and workspaces. This is especially significant and disproportionate for TGNC people (transgender and gender nonconforming), who face repercussions for coming out as trans and the fear of stigmatisation and violence (Leatherman, 2019; Matsuda, 2015; Russell & Frachtenberg, 2021).
- Trans people and bisexual people are the smallest represented, and trans people are the least tolerated group in work spaces (Oberst, 2010).
 - Trans-invisibility encourages workplace exclusion and marginalisation, which can lead to adverse health outcomes (Beauregard, 2018).
 - Trans tech workers are paid less than their non-trans peers (Lopez, 2020)
 - Intersectionality also impacts trans people's workplace experiences:
 - Shift in workplace status after transitioning: sometimes trans men received more respect post-transition, and trans women dealt with effects of misogyny in STEM (DeNisco-Rayome, 2019; Oberst, 2010).
 - White trans people fare better than trans POC in the workplace: black and Indigenous trans people in Canada are more likely to face violence, harassment, and poverty, and less likely to benefit from organisational policies (Russell & Frachtenberg, 2021; Fosbrook, et al., 2020).
 - Outside the framework of 'traditional' gender, non-binary people may be looked upon even less favourably than binary cis and trans people (Russell & Frachtenberg, 2021).

2

HOW COULD THE TECH INDUSTRY ADAPT ITS WORK CULTURE TO BETTER RECRUIT AND RETAIN MEMBERS OF THESE COMMUNITIES?

Adaptations in HR policies (Riley, 2008; Butkute, 2016; Crittenden, 2017; Schnitzer & Fang, 2015; Hill, 2006; Unsay, 2020; Ng et al., 2017; APS, 2014; Out Leadership & PwC, 2019):

- Institute non-discrimination and anti-harassment policies and domestic partner benefits
- Amend gender binary on forms
- Provide diversity trainings
- Institute gender neutral bathrooms
- Expand health insurance to cover partners and support transition
 - Raise visibility for queer people in the workplace by emphasising commitments to equal opportunities as a recruitment tool
 - creating internal queer groups for support and networking opportunities
 - encouraging outness in management and supervisors
 - matching queer employees to mentors
 - developing leadership opportunities for queer employees.

Adaptations in institutional policies (Riley, 2008; APS, 2014; Schnitzer & Fang, 2015; Quigley, 2019; Ng et al., 2017; Crittenden, 2017; Out Leadership & PwC, 2019; Sinton et al., 2021; Hill, 2006):

- Make commitment to diversity explicit and hold the same expectations from partners
- Partner with and support LGBTQ2S+ affiliate Like QueerTech and ally groups
- Create and support creators of products and services that benefit the queer community
- Visibly engage with LGBTQ2S+ equality efforts and lobby for and advance queer rights
- Use inclusive language in advertising and market respectfully to queer stakeholders

Adaptations in the actions of colleagues:

- Supportive co-workers should (Sinton et al., 2021; Riley, 2008; Langin, 2019; Matsuda, 2015)
 - normalise sharing pronouns
 - demonstrate ally-ship by understanding and displaying flags/symbols of solidarity
 - actively participate in diversity trainings
 - be aware of LGBTQ2S+ invisibility and the strains of coming out
 - use people's correct names and pronouns, even when they are not around .
- Supportive management should (Riley, 2008; Out Leadership & PwC, 2019; Butkute, 2016)
 - make their commitment to zero harassment explicit
 - model inclusive work culture
 - have out and accepted role models should be present in upper management .

Adaptations in policies for accountability and transparency (Velinov, 2019; Crittenden, 2017; Sinton et al., 2021; Out Leadership, 2019; Butkute, 2016):

- Use data points to assess worker outcomes
- Collect data to monitor inclusion efforts
- Provide clear paths to progression and mobility within the organisation
- Use inclusive communication, such as gender-neutral language, internally
- Consistently review all policies and practices affecting workers to maintain objectivity

RESEARCH QUESTIONS SUMMARY: LIVED EXPERIENCES, TECH INDUSTRY ADAPTATIONS, BARRIERS AND TOOLS

3

WHAT BARRIERS NEED TO BE ELIMINATED, AND WHAT TOOLS CAN BE IMPLEMENTED TO DO SO?

Multiple oppressed people face unique issues that negatively impact their experiences

- Solution: The most urgent measures and targeted interventions need to be built and implemented to tackle issues that arise for these groups.

Trans people face challenges that can impact their ability to continue in their fields (hormones, lack of resources such as appropriate restrooms, ignorance/stigma) (Beauregard, 2018; Matsuda, 2015; Leatherman, 2019).

- Solutions:
 - Specific measures to support Transgender and Gender Non-Conforming (TGNC) workers (recognising name changes, including trans healthcare, and providing accessible gender neutral bathrooms)
 - Diversity training to help employees support TGNC workers (diversity workshops, listening to trans voices, sharing and respecting pronouns) (Ng, et al., 2017; Leatherman, 2019; Riley, 2008; Matsuda, 2015)

Lack of queer mentors and role models, especially for queer people who are more alienated from STEM spaces, such as trans and Indigenous people

- Solution: Leadership opportunities for queer people, supporting diverse role models, increasing visibility of queer issues, reducing pressure to separate professional and personal lives in STEM culture to foster disclosure (Kurzweil, 2010; Poku, 2020; Hughes, 2018; Suri, 2015).

Disconnect between the skills employers value (collaboration, relationship-building), those that queer employees think they possess (empathy and inclusiveness), and between what employers and queer employees prioritise

- Solution: Companies should better understand the needs of queer employees and align their priorities with those of their workers (Out Leadership & PwC, 2019).

Queer people often unaware or skeptical of organisational resources (Schnitzer, & Fang, 2015; Out Leadership & PwC, 2019; Lloren et al., 2016).

- Solutions:
 - Include queer people when deciding on which queer-friendly policies to adopt
 - Consult several organisations, in particular those that work with more severely affected populations such as TGNC and BIPOC communities
 - Ensure that workforce is aware of policies by implementing measures in recruitment and reviews
 - Consistently demonstrate commitment to social justice.

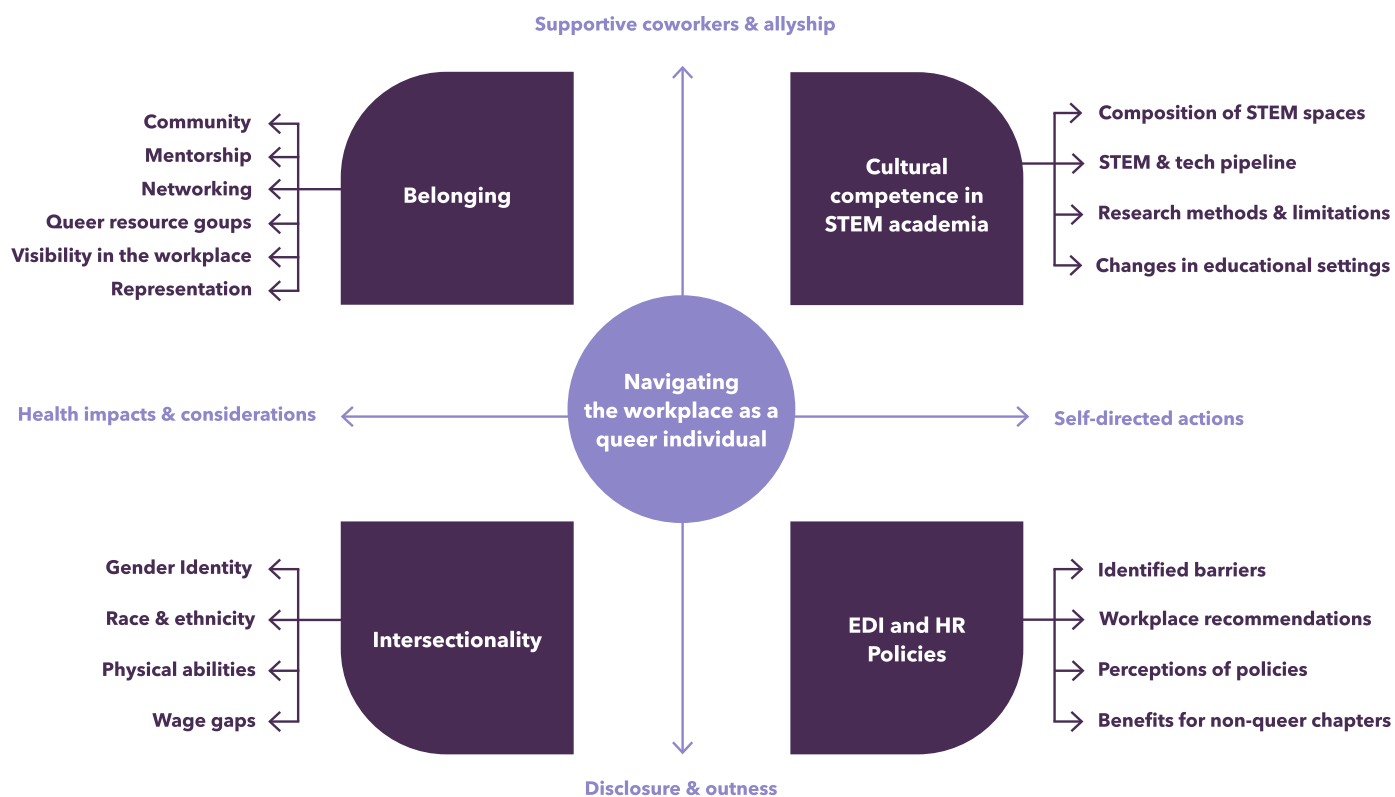
Lack of research in the field itself.

- Solution: Collect measures on sexual orientation and gender identity so that researchers, policymakers, and organisations can assess (1) educational and cultural barriers, (2) disparities across STEM fields, (3) intersections of gender, ethnicity, and class, and (4) pipeline issues; and to aid in developing accountability systems to protect against bias and discrimination (Freeman, 2020; Langin, 2020).

FRAMEWORK FOR UNDERSTANDING AND IMPLEMENTATION

Five main themes emerged from the literature review that interact to create a framework for understanding barriers and opportunities, as well as possibilities for implementing beneficial changes. These themes are: Belonging, Intersectionality, EDI and HR policies, Cultural competence in STEM academia, and Navigating the workplace as a queer individual. Highlights and an overview of research related to each theme are described in more detail below.

Figure 1.
The five major themes that emerged in the literature review and their subcategories.



FRAMEWORK FOR UNDERSTANDING AND IMPLEMENTATION

1

BELONGING

Multiple studies that were part of the literature review emphasized that a lack of belonging typifies the work experiences of queer workers (Miller & Downey, 2020; Steele, 2018; Ruiz, 2015; Casper et al., 2020). These sub-themes coalesce to create environments that support queer workers through fulfilling their need for belonging.

- **Community:** Importance of having a space and community both within and outside of the workplace.
- **Queer resources and groups:** Both within and beyond workplaces that offer queer workers opportunities to build a sense of belonging within their workplaces and fields.
- **Mentorship:** Queer mentors who offer guidance on strengthening career opportunities, as well as navigating queer identities and disclosure.
- **Networking opportunities:** Allow queer workers to connect with one another and find mentors, which are both key in establishing a sense of belonging.
- **Visibility and representation in the workplace:** Two elements that go hand in hand. It is important to have empowering queer voices, “out” role models in upper management, and success stories that can motivate queer people to view tech as a viable field for them in which they belong.

2

INTERSECTIONALITY

Intersectionality is the presence and interplay of individuals’ multiple identities. It emphasizes how multiply oppressed identities compound negative outcomes for queer workers, and include the following elements:

- **Gender identity:** For example, TGNC (Trans Gender Non-Conforming) individuals have extremely poor outcomes in STEM. These include problems with physical and mental health, unique issues such as transitioning in unsupportive environments, inaccessibility, lack of safety, and struggles with belonging (Matsuda, 2015; Craig, et al., 2020; Blind, 2020; Leatherman, 2019).
- **Race and ethnicity:** Black, Indigenous, and people of colour (BIPOC) identities were found to impact workplace experiences. Black women are less included and accepted, BIPOC individuals are less likely to be viewed as innately talented, and minority queer people are more likely to be harassed/devalued (Alfrey & Twine, 2017; MaRS, 2018; Hill, 2006; Else, 2021; Sundermeir, 2018).
- **Physical ability:** Although there is a lack of significant research in this area, some study highlights note that disability status was related to worse employment outcomes, and that queer people are more likely to have chronic health condition and/or disability (Egale, 2020; Hango, 2021; Miller & Downey, 2020).
- The literature on **wage gaps** also illustrates the way different identities impact economic capital.

3

CULTURAL COMPETENCE IN STEM

A major domain shaping queer people's workplace experiences was the culture within STEM spaces, and how queer identities were understood and played out in them.

- **Composition of STEM spaces:** Queer people are underrepresented, especially TGNC. Software developers are largely cisgender (99%), heterosexual (93%) men (92%) (Freeman, 2019; MaRS, 2018; Caspar et al., 2020; Stack Overflow, 2020).
- **STEM and tech pipeline:** This pathway begins with educational experiences and extends to post-graduation/early career experiences.
 - Features of STEM environments are salient to a strong STEM identity for queer people, and include perception of departmental norms, peers and affirming/exclusionary interactions (Vaccaro et al., 2021).
 - Scientific ideals, such as being objective and impersonal, can discourage identity disclosure and drive feelings of isolation for queer people who have higher rates of leaving STEM academia due to negative experiences and low levels of belonging (Freeman, 2020; Sundermeir, 2018; Stout & Wright, 2016; Oberst, 2010; Suri, 2015).
- **Changes in educational settings:** Measures need to be taken to make STEM spaces more welcoming for queer students, and to broaden how queer identities are understood and engaged with in academic spaces.
 - Some changes STEM departments can implement are providing space, funds, and staff support for queer programs and diversity efforts by partnering with queer organisations, and helping faculty create affirming spaces and introduce classroom interventions since they can increase ally-ship (Hughes, 2018; Crittenden, 2017; Vaccaro et al., 2021; Gioia, 2020; Murphy et al., 2021; Freeman, 2020).
- **Research methods and research limitations:** Calls for changes have been made about how data was collected by studies within the STEM field. For example, there is a lack of intersectional data, survey questions are binary/othering, instruments are flawed, and TGNC people have been excluded.
 - By broadening scope of research on queer people in STEM, researchers, universities and funding organisations can better assess educational and career barriers, and examine intersectional disparities for queer students (Casper et al., 2020; Holman, 2019; Brewster, 2012; Freeman, 2020).

4

EDI AND HR POLICIES

Companies' policies were heavily studied and contribute to queer people's workplace experiences (Lloren et al, 2016).

- **Identified barriers** refers to the obstacles queer people faced in the workplace, such as negative workplace experiences, more social marginalisation & harassment, more discomfort discussing personal lives/relationships, and high unfairness-driven turnover rates (Cech & Pham, 2017; Cech & Waidzunus, 2021; Langin, 2021; Dice, 2018; Scott et al., 2017).
- **Workplace recommendations** are those that can remedy barriers to make environments more hospitable for queer workers: there is broad consensus on including policies covering sexual orientation and gender identity; domestic partnership benefits for queer couples; and anti-discrimination policies (Ng et al., 2017; Hill, 2006; Riley, 2008; Webster et al., 2018; Day & Schoenrade, 2000).
- **The perception of effective EDI policies**, or their lack thereof, is reported as a primary consideration in queer people's choices to seek out or leave a workplace: queer workers are more concerned with HR policies & benefits; more likely to endorse that company policies are neither fair nor inclusive, and to find policies rhetorical (Quigley, 2019; Schnitzer & Fang, 2015; Ruiz, 2015; Suen & Chan, 2020; Blind, 2020; Lloren et al., 2016; Velinov, 2019).
- **Policy benefits for non-queer chapters** refers to the benefits queer-supportive policies often hold for non-queer employees/employers/organisations, such as higher levels of perceived organisational support and engagement for all employees; a strong relationship with company innovation; access to a diverse hiring pool; increased productivity; stronger firm value, brand loyalty, and financial performance, and more citations and generalisability of published work (Pichler et al., 2017; Vu, Lamb, & Zafar, 2020; CVCA, 2019; Velinov, 2019; Crittenden, 2017; Nature, 2014).

5

NAVIGATING THE WORKPLACE AS A QUEER INDIVIDUAL

Modulating one's identity and presentation in the workplace comprises the theme at the core of the review.

- **Self-directed actions:** Actions taken by queer people to manage their identities in the workplace include rationalising workplace exclusion, participating/blending into majority culture, regulating gender presentation to appear less feminine, compartmentalising professional and private lives, covering queerness/passing as non-queer, and overachieving (Miller et al., 2020; Alfrey & Twine, 2017; Oberst, 2010; Langin, 2019; Mara et al., 2020).
- **Disclosure and outness:** Experience of when and how queer people choose to be out at work range from creating transition plans with HR, asserting oneself as out and proud, remaining largely closeted (Suri, 2015; Steele, 2018; Mattheis, et al., 2020; Bennett, 2018).
 - Though there are benefits to being out (more acceptance, lower stress and negative attitudes, higher productivity, urge to give back to the queer community), queer workers limit the extent to which they are out at work to avoid facing repercussions and discrimination (Barres et al., 2017; Kurzweil, 2010; Broadfoot, 2015; Nelson, 2019; Matsuda, 2018; Oberst, 2010).
- **The support and actions of allies** in the workplace: Fundamentally shape queer workplace experiences.
 - Supportive coworkers influence workplace safety and comfort, better workplace attitudes and perceptions, and lower strain for queer peers (American Physical Society, 2014; Schnitzer & Fang, 2015; Webster et al., 2018; Nelson, 2019).
- Queer people must take into account **health impacts and considerations** in the workplace.
 - Queer people have worse health outcomes and are more likely to be living with chronic health conditions, to face unique physical challenges such as fluctuating hormones and medical procedures due to transitioning, and to experience more negative wellness outcomes like exhaustion, stress, trouble sleeping and depression (Egale, 2020; Matsuda, 2015; Cech & Rothwell, 2018).
 - Workplace harassment compounded these poorer physical and mental health outcomes. (Else, 2021; Lloren et al., 2016; Cech & Waidzunus, 2021; Langin, 2021; Beauregard, 2018).
 - Despite the hurdles queer people face at work, they are also vocal and proactive about changes that workplaces need to implement. Navigating queer and tech identities can be a force for self-actualisation.



METHODS

An extensive and thorough literature review was conducted to understand queer workers experiences in STEM and tech. We assembled a list of search terms and databases, after which we ran our search queries. We used a two-pronged approach to review the literature in this domain. First, we broadly captured all relevant academic literature on the experiences of queer people in tech. Second, we found targeted academic and non-academic sources to address the main research questions. We found it essential to include community resources, reports, and surveys to include narratives outside the bounds of academia, and to conduct follow-up searches to have a well-rounded understanding of the LGBTQ2S+ community's workplace experiences in tech.

Our inclusion criteria aimed to target articles that were:

- 1 published in English
- 2 focused on LGBTQ2S+ people in STEM and technology industries
- 3 primarily based on data focused on or collected in North America.

Our initial and follow-up academic searches resulted in 4861 results which were briefly reviewed by the research team to select a total of 83 articles relevant to the project. After consensus-based review and a thorough readthrough, we included 61 academic articles in the literature review. Non-academic sources were targeted and supplementary materials that we included to flesh-out information where it was lacking: we included a total of 46 such resources in our final review.

ACKNOWLEDGMENTS

We would like to thank the following people for their dedication and support to complete the first phase of this research study:

Dr Paul-Robert Juster

Centre de recherche de l'Institut universitaire
en santé mentale de Montréal, Université de Montréal

Samuel Villeneuve

Undergraduate Student (Université de Montréal)

Sanjna Navani

Graduate Student (KU Leuven)

Bradley Alexander

PhD Candidate (McGill University)

Ophélie Larocque

Graduate Student (Université de Sherbrooke)

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Amanda Chalupa

Business Development Consultant (imagine ideation)
and PhD Candidate (McGill University)

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COMMUNITY PARTNERS



REFERENCES

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ABOUT QUEERTECH

QueerTech strives to queer the tech ecosystem by breaking down barriers, creating spaces, and connecting communities to support and empower Queer people to thrive. This is no small mission, yet we have taken it on with great success and positive impacts.

We turned the challenges of the pandemic into an opportunity to double down on efforts to bring the community together and to ensure that diverse voices were not left behind. This included hosting 15 QT Connect Cafes, allowing more stories about Queer people in the tech industry to be told and known. This year we also hosted two virtual job fairs, as well as a virtual PrideHacks which helped provide critical support to 12 projects from 10 non-profits.

In 2021, membership has doubled in 2021, from 3,000 to 6,100. This year alone, QueerTech:

- Helped over 85 companies to hire diverse candidates
- Delivered 10 diversity training workshops to tech startups
- Collaborated with over 70 community groups across Canada to grow QueerTech's impact in 8 Canadian cities.
- Helped over 75 Queer people find placements in tech companies across Canada
- Hosted virtual events with over 1,500 people
- Reached out and built partnerships with other queer networks and organizations both in Canada and internationally
- Secured funding and conducted an extensive literature review about the experience of Queer people in tech and the barriers to get there
- Designed and launched a research project informed by this research and in collaboration with academic, industry, and community partners.

These are all significant efforts and positive impacts towards ensuring diversity at multiple levels.

QueerTech's mission is informed by 5 pillars:

- 1 Breaking down barriers
- 2 Thriving and belonging
- 3 Supporting and empowering communities
- 4 Creating inclusive spaces
- 5 Connecting communities.

To learn more about QueerTech and Join our community go to www.queertech.org
Questions or Feedback about this search, contact QueerTech : hello@queertech.ca

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