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Career Change of Skilled Immigrants in Canada: A Qualitative Case Study of Immigrants Career Change and Self-Directed Learning

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Career Change of Skilled Immigrants in Canada: A Qualitative Case Study of Immigrants Career
Change and Self-Directed Learning

by

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A THESIS

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Abstract

This qualitative case study explores the learning experience of skilled immigrants whose careers were negatively impacted by uncertainty or unprecedented changes associated with their careers. While career change is a new norm in the age of digital transformation, individuals must utilize skills that help them adapt to a new environment and pivot their careers once needed. Skilled immigrants are significant contributors to the Canadian economy; therefore, it is essential to understand how they navigate their careers during an economic crisis in Canada. While most literature focuses on the career change of skilled immigrants for the first job in Canada, few studies explore a career change of skilled immigrants who have already established a career but still struggle to pivot their career once needed. This study was done from the lens of adult learning by applying two theoretical frameworks of self-directed learning and transformative learning. By applying a qualitative case study, this study explores the learning experience of twelve skilled immigrants that occurred during the transition period of a career change in Canada. The finding of this study confirms that participants self-designed their learning while they acquired new knowledge and skills for a new career. Additionally, these skilled immigrants illustrated that during the period of a career change, they developed positive characteristics that are attributed to self-directed learners. Moreover, exploration of these participants' stories demonstrates that their perspective toward the notion of career development has transformed significantly.

Keywords: skilled immigrants; career change; self-directed learning; transformative learning

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Dedication

I dedicate this master's thesis to the memory of all innocent students killed in flight #PS752 who never had a chance to complete their graduate degrees in Canada.

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Chapter One: Introduction

1.1 Introduction to the Problem

Technological advances in automation and digitalization are rapidly changing Canada's global economy and organizational structures. Consequently, emerging new skills and job requirements call for workers to become more flexible and adaptable to unprecedented changes and equip themselves with the tools and skills to thrive in an ever-changing economy. The concept of a career is no longer defined as a lifelong job within a boundary of one organization. Individuals may encounter voluntary or involuntary alternation that triggers career change within the boundary of an organization or outside it. As a consequence of uncertainty in the workplace, a career change of individuals is on the rise. Therefore, individuals are required to become lifelong learners capable of learning how to learn and self-design their career to successfully initiate and manage a career change to align themselves with an internal and external stimulus.

In the context of the knowledge economy, skilled immigrants are an essential part of the Canadian labour market. Therefore, their employment performance and professional competency would influence the success of the Canadian economy while going through unprecedented changes caused by technological advancement. While most of the literature has focused on employment settlement of skilled immigrants for the first time in Canada, little is known about the successful performance of immigrants who have already established a career but have to go through a career change due to the impact of economic changes.

Through the process of a career change, individuals require learning cognitive and metacognitive skills to be able to embrace the consequences of change. It is, therefore, beneficial to explore and investigate the learning experience occurring through the process of a career

change for those who would successfully complete a career change. Those who have successfully learned how to learn and made a successful career change rely on their self-directed learning at the time of future crisis. Investigating learning experience of these successful individuals will shed light on how others could learn to navigate, plan, and proactively prepare themselves for a voluntary or involuntary career change.

The purpose of this qualitative case study is to explore attitudes and learning practices of skilled immigrants who have embraced changes in their environment. These individuals successfully shifted their careers to a new industry of their choice due to their self-directed and transformative learning practices at times of crisis and changing climate. By having specific criteria, this study explores the experience of immigrants who already established a professional career in Canada but later had to make a career change due to a negative impact of economic change on their careers. Applying a qualitative case study, I explore their motives, values, perspectives, and practice of seeking information and resources for learning new skills and knowledge. This case study is bounded by skilled immigrants who reside in Alberta, in which recent economic changes have impacted the careers of many individuals. Using the case of Alberta's economic impact on careers of individuals to project how an economic crisis in another context could impact individuals. The study of successful career change of immigrants in an unstable economy would shed light on the process of adaptability of skilled immigrants of Canada in the context of the digital transformation of the global economy and workforce. This concept illustrates how a fast-changing environment affects immigrants' careers and how they cope with a fast-changing environment and self-direct their careers in Canada.

1.2 Research Context

In the age of technological advancement and constant digital automation, the business models of organizations and the global economy are going through dramatic transformations. Emerging transformative technologies are enforcing “a new economic structure, social revolutions, cultural transformations, and work models, which is comparable to industrial revolution” (Cassio & Montealegre, 2016, p. 351). Digital technologies, including artificial intelligence, machine learning, big data, cloud computing, and digital platforms, are the main driving force of global, industrial, economic, and social transformation (Hou & Wu, 2017). These emerging technologies pave the way for new products and services and reshape the operation and structure of regular tasks and works. While these transformative changes would increase industry productivity and quality of life, the history of technological and digital transformation illustrates the disruptive impact on the concept of the workforce, the model of business, the societal dynamics, and the individuals’ career for an unknown period.

According to Organization for Economic Co-operation and Development (OECD) speculation, 14% of all jobs are susceptible to automation in the next 15 to 20 years (OECD, 2019). Because of task automation, 32% of these jobs are prone to be radically transformed. A research study of the Committee for Economic Development of Australia (CEDA) (2015) indicated that 40 percent of occupations in Australia are susceptible to automation in the next 10 to 15 years. A study originating in Finland also anticipates that in the next two decades, one-third of Finland and Norway’s workforce will be prone to job loss (Pajarinen, 2015). Some scholars consider digital automation a pivotal driving force of changes in the tasks and job descriptions. Frey and Osborne examined 702 occupations in the US. They estimated that 47% of the US labour is at the risk of disruptive automation and transformation, which prompts the reallocation

of workers to tasks with more innovative, social, digital, and problem-solving skills, less susceptible to automation (Frey & Osborne, 2017). Anani represented digital transformation associated with unprecedented advancement of technologies within Canadian industries, including manufacturing, health care, retail, finance, and transportation. “These industries will require talent with the ability to use key digital technologies going forward, as well as to drive business growth to increase revenue, expand sales capacities, and spur further innovation” (Anani, 2018, p 172).

In a systematic literature review, Laar et al. (2017) identified that the development of knowledge society in the 21st century requires individuals to gain technical knowledge and skills to maintain their professional competence and develop learning, thinking, and problem-solving skills for them to succeed. Indeed, individuals need to develop their learning process and thinking process to become lifelong learners and adapt to emerging technologies, which transform job requirements (Chai et al., 2015). These industries’ dramatic growth and development intertwined with digital automation impel workers to become lifelong learners who know how to learn, constantly adapt, and embrace repeated career change, and compete and flourish in a rapidly growing global economy (Arntz et al., 2016; Savickas, 2012; Chen, 2020; London, 2011).

The literature on career development in the 21 century indicates that in the highly uncertain modern workplace, individuals are experiencing more frequent and complex change across the boundaries of occupations, industries, and organizations (Sullivan & Arthur, 2006; Sullivan & Baruch, 2009; Sullivan & Aris, 2019). The career change of individuals can be voluntary in which individuals deliberately make new choices because of external or internal motivations. Because of this change in thinking, individuals will plan for a new career path

within or outside their current organization. Another type of career change is triggered by involuntary disruptive events, such as layoffs, restructuring, downsizing, or other business activities that can cause job loss. Disruptive events cause abrupt changes in the workplace that can facilitate individuals' voluntary or involuntary career change (Ibarra, 2004). Disruptive events could trigger dilemma, disharmony, or disjuncture addressed in adult learning literature as the initiator of learning (Jarvis, 2006; Mezirow, 2012). In a narrative inquiry of a vocational transition of adults, Ayres (2016) illustrated that all participants of the study experienced disjuncture events that changed their career path and entailed vocational changes.

Disruptive events are initiators of learning for change, and they have the potential to stimulate autonomy on personal exploration and experimentation of individuals in their interaction with new environments. However, disruption in the individuals' career path takes proper soft skills, metacognitive ability, meaning-making, and positive perception of individuals to navigate a successful career outcome from disruptive uncertainty (Ibarra, 2004; Kunda et al., 2001). A transition can negatively or positively transform an individual's roles, routines, assumptions, and interaction with the environment (Anderson, Goodman, & Schlossberg, 2011). Indeed, career change as a fast-emerging part of career development requires meta-competencies such as self-directed learning skills that help individuals explore and become self-directed in their learning and proactively engage in their environment (Ashforth et al., 2001). Individuals who successfully develop self-directed learning skills such as self-regulation, self-reflection, and self-judgment would embrace changes and successfully thrive within various environments. (Murray, 2015).

The following section explores the role of skilled immigrants in Canada and how they contribute to the knowledge economy.

1.3 Skilled Immigrants in Canada

Canada is experiencing the pressure of automation and transformation throughout its economy and labour market sectors. The Advisory Council on Economic Growth of Canada (2017) has predicted that by 2030, one-quarter of Canadian workers' tasks could be displaced because of automation and technology transformation being adopted by organizations across all industries. Within the proposed budget of 2019, the federal government acknowledged the disruption of automation and its impact on the Canadian economy. For Canadians to thrive in such a technology-driven economy, the government introduced the "Canada Training Benefit," by which individuals are financially supported to plan their required training, strengthen their skills, and embrace change. The government's decision alone indicates the importance of skills development to tackle changes in individuals' careers.

Canadian skilled immigrants play a crucial role in the necessity of population growth and the success of Canada in the knowledge economy. To compete globally, Canada has shown a desire to shift its immigration policies toward increasing its competitiveness in a global economy by admitting more skilled immigrants in the last two decades (Andreson and Guo, 2009). In the early 1980s, most immigrants migrated to Canada under the category of "family reunification," whereas this popular category was ranked down by the economic category in early 2000 (Statistics Canada, 2008). Compared with previous years in 2014, the number of economic class immigrants increased by 11%, while family class immigrants declined by 18% (OECD, 2016). According to Statistic Canada (2016), landed immigrants represent 21.9% of Canada's population, within which 16% percent of this number are recent immigrants of Canada who landed between 2011 and 2016.

Besides the role of immigrants in population growth, skilled immigrants are also active contributors to the Canadian economy. Half of all new immigrants who arrived in Canada between 2011 and 2016 possessed a bachelor's degree or higher (Statistics Canada, 2016). In 2017, while 74% of Canadian-born aged 55 and older acquired employment growth of this range, 60% of employment gains of the core working age (between 25 and 54) were accounted for by landed immigrants. In recent years, most growth in immigrants' employment rate accounted for industries such as professional, scientific, and technical services and finance, insurance, real estate, rental, and learning (Canada Statistics, 2018). These figures indicate that the prosperity of the Canadian economy within the context of the global knowledge economy is intertwined with the employment performance of immigrants. The projection of Statistic Canada (2018) shows that the percentage of landed immigrants in Canada would rise between 24.5% and 30% by 2030. Therefore, the contribution of skilled immigrants to Canada's population growth and its economy continues to grow.

1.4 Statement of the Problem

As a process or an attribute, self-directed learning is a prerequisite skill for lifelong learning that is necessary for a repeated career change and the success of individuals in the digital age (Greveson & Spencer, 2005). Individuals who have engaged in self-directed learning processes, such as a self-directed career change, have successfully developed the learning skills required for lifelong learning and self-development (Murray, 2015). Highly self-directed individuals can create meaning and purpose out of their environment, navigate and engage in needed lifelong learning practices, and make transitions required to their career management.

Skilled immigrants with adaptability and learning capability are vital contributors to a thriving knowledge economy.

While the Governments of Canada and organizations are trying to cope with the impact of unprecedented changes on the global economy, skilled immigrants have to navigate through available resources and manage their learning to thrive throughout their careers. The future of the Canadian workforce relies on the success of the immigrant population and their adaptability to a fast-changing workplace; hence, it is crucial to understand how skilled immigrants acquire learning skills throughout a career change in Canada from their perspective.

Statistics Canada (2017) identified that the employment rate of recent immigrants, who landed between 5 and 10 years ago, is 6.8% less than that of Canadian-born workers. While the uncertain world of work in the digital age requires adaptability and learning skills of individuals to self-design their career, skilled immigrants must equip themselves with the requisite knowledge, skills, attitudes, and tools to become flexible to abrupt changes and develop their self-directed learning abilities to utilize various technologies, strategies, transform their approaches in problem-solving processes, and learn how to learn and make a good career change once is necessary. Recent academic papers suggest that most research on the employment of skilled Canadian immigrants focuses on barriers of first-time employment and adaptation to a new society. In contrast, it provides little insight into immigrants' performance and learning experience who have already overcome the initial barriers to Canada. Indeed, these skilled immigrants have successfully acquired a professional position but still encounter employment and job insecurity challenges and disruptions caused by the economic crisis throughout their professional careers in Canada.

1.5 Purpose Statement

The purpose of this study is to explore the self-directed learning experience of skilled immigrants who had a successful career change to a new industry of their choices by developing learning strategies and an attitude toward changes. This study focuses on these skilled immigrants' perspectives and the self-analysis of their own learning experiences that have led to a successful career change at the time of instability. Therefore, by applying a qualitative case study, I investigated motives, values, attitudes, perspectives, and their practice of self-direction and self-management regarding their vocational learning needs. This research focuses on career changes of skilled immigrants who already established a career for a minimum of a year in Canada but had to make a career change driven by the negative impact of the economic crisis. I believe the findings of this research, the study of successful career change of immigrants in an unstable economy, illustrate how a fast-changing environment affects immigrants' careers and how they self-design their career in a fast-changing environment ahead of their career in Canada. In addition, the results could inform other skilled immigrants, policymakers, and educators about the benefits of adaptability and self-learning in the transforming global economy and workforce changes.

This research is informed by adult learning theories, including self-directed learning and transformative learning to explore the motive and lifelong learning practice of skilled immigrants who have successfully self-designed their careers change at times of crises and disruption. Knowles defined self-directed learning as a “process in which individuals take the initiative, with or without the help from others, in diagnosing their learning needs, formulating goals, identifying human and material resources, choosing and implementing appropriate learning strategies, and evaluating learning outcomes” (Knowles, 1975 p.18). Self-directed learners of this study have

learned to adapt strategies that support them to requisite knowledge, skills, and attitudes to cope with changing environments and thrive in a transforming economy. Immigrant workers in an ever-changing economy must identify and anticipate necessary skills and knowledge, explore and evaluate their learning resources to meet their goals, continually integrate their new skills and knowledge in their work experience, and continuously create new opportunities for themselves.

In addition to self-directed learning theory, transformative learning theory provides a theoretical framework to illustrate the pivotal perspective transformation of immigrants who have become self-directed learners and take the initiative of their learning associated with their successful career change. Mezirow (2000) defined transformative learning as:

the process by which we transform our taken-for-granted frames of reference (meaning perspectives, habits of mind, mindsets) to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove more true or justified to guide action. (p. 8)

Indeed, this theory informs how immigrants make meaning of their world, that lives and work, and empower themselves by learning critical thinking and modifying their knowledge and perspective.

1.6 Research Questions

To explore how skilled immigrants learn, the below questions guided this research:

1. What are the external and internal factors that motivated skilled immigrants to initiate a career change?

2. What are the learning strategies that skilled immigrants developed for a career change?
3. How has self-directed learning contributed to the success of their career change?

Simons (2009) has emphasized that while research questions are applicable instruments to keep the researcher on track, the researcher may revisit them to check the validity of the research procedure and reframe the questions in case other appropriate questions arise throughout the research process.

1.7 Research Methodology

For this study, I applied a qualitative case study to explore the effective learning experience of skilled immigrants who have successfully shifted their careers to a new industry of their choice by continually learning new skills and knowledge. While my academic background and research experiences are quantitative, my worldview of this research leans toward the social constructivist approach to the research study. Creswell (2018) indicated that

Social constructivists believe that individuals seek understanding of the world in which they live and work. Individuals develop subjective meanings of their experiences— meanings directed toward certain objects or things. These meanings are varied and multiple, leading the researcher to look for the complexity of views rather than narrowing meanings into a few categories or ideas. (p. 10)

Qualitative research design constructs meaning from the experience of individuals and interprets how people live and react in the context of a phenomenon. Merriam (2009) indicated that qualitative research is interested in “understanding how people interpret their experience, how they construct their worlds, and what meaning they attribute to their experience” (p. 6).

Qualitative research design focuses on understanding participants' perspectives about their experience while it might be a past event or not accessible for observation of the researcher. Moreover, this research design could enable the researcher to inductively gather data from various interviews and focus groups and build concepts and theories out of it. Since this study aimed to generalize a process from the past experience of skilled immigrants, a qualitative design of this study enabled me to explore and reveal multiple realities embedded in the experience of participants that occurred in the past.

1.8 Significance of the Study

This study aimed to provide insights about essential factors involved with successful career changes of skilled immigrants that could be beneficial to individual skilled immigrants, employers, counselors, educators, and policymakers. Skilled immigrants who might think about a career change could benefit from learning what to expect through the transition period of a change, therefore mindfully planning for a successful change. The finding of this research could help the skilled immigrant to understand that it is possible to turn an adverse event that occurred in their career, such as lay off or uncertain future career, into a positive outcome by being open-minded to new opportunities and adapting to changes. Further, educators and counselors could benefit from this study by increasing their knowledge about factors that trigger a career change along with barriers that could challenge skilled immigrants while they go through a career change. Finally, this study is also beneficial in generating knowledge about the challenges involved with the career pivot of skilled immigrants. By understanding these challenges and addressing them with effective policies or training opportunities, this study could utilize immigrants' skills for a thriving economy.

Chapter Two: Literature Review

Exponential technology advancement has changed the structure of organizations and has impacted employability in the digital age. As a result, career change has become a common phenomenon that involves many uncertainties for the future of individuals. External factors such as globalization and its effects on the workplace, the exponential development of technology, and changes in the structure of business and organizations caused by digital transformation play an ever-changing role in the nature of career development. Further, Savickas et al. (2009) emphasized that “no matter how stable individual characteristics might be, the environment is rapidly changing. Therefore, theoretical models are needed that emphasize human flexibility, adaptability, and life-long learning” (p. 240). These new trends call for individuals’ adaptability and flexibility to learn how to make a necessary career change once changes in their work-life demand it (Chen & Hong, 2020; Hall, 1996; Savickas, 2012).

In this chapter, I review the literature on a new concept of career in the 21st century, employability of skilled immigrants in Canada, followed by the assessment of literature concerned with how adults learn to learn based on two theoretical frameworks of self-directed learning and transformative learning.

2.1 Concept of Career in 21st Century

Along with pivotal changes that have altered the world of work, the career conceptualization of the 21st century also has transformed to address changes in the concept of career from employers’ responsibility to individuals. In the 20th century, career context and the associated career development theories were fundamentally defined based on stability, predictability, and job security in a bounded organization (Savickas et al., 2009). An individual’s

career used to start with a transition from formal education to an entry-level position in an organization and “were justly rewarded with promotions and advancements and assumed greater responsibilities until it was time to wind down and retire” (Wehmeyer et al., 2019, p. 181).

Historically, workers would stay within a bound of organization/positions for the majority of their career. Career theory conceptualization was based on this model of working accordingly.

Life Span theory by Donal Super (1953) is a traditional career development theory in which the five stages of growth, exploration, establishment, maintenance, and decline are linear and predictable stages of 20th century career development theory.

While organizations and workplace requirements drove career development in the 20th century, an individual’s career development in the 21st century no longer belongs to a sole organization from beginning to end. Individuals are responsible for their careers and must self-design and self-manage their professional careers. These changes in the workplace have evolved the concept of career development theories (Hirschi, 2018; Savicas, 2009; Hall, 1996; Lent, 2018). Career conceptualization shifted from a linear career development perspective intertwined with requirements of an organization towards a social constructivist perspective in which a career is considered an evolving and continuously changing concept that emphasizes life-design, goal setting, adaptability, self-construction, continuous learning, and the self-direction of individuals (Guichard & Lenz, 2005; Wehmeyer et al., 2019, Hall, 1996). One constructivist approach in the career development model conceptualizes a proper career of the 21st century as a protean in which individuals are flexible, highly driven by values, self-directed, and self-constructed (Hall, 1996; Briscoe & Hall, 2006). Instead of suggesting a specific behaviour, the core concept of a protean career emphasizes a particular mindset that reflects “freedom, self-direction, and making choices based on one’s personal values” (Brisco & Hall, 2006, p. 6).

Value-driven career orientation and self-directed career management are two core competencies of a protean career that individuals must develop to reach the maximum potential of a protean career or for the person to be adaptable. Continuous learning and mastery are highly recommended as lifelong learning and developmental processes to achieve a protean career (Hall, 1996). Individuals with protean career attitudes are value-driven and self-directed in the pursuit of required learning for their career development; therefore, they are able to properly adapt to changes and take a proactive approach to explore and find suited proper job opportunities and become “adaptive in terms of performance and learning demands” (Segers et al., 2008, p. 8). On the other hand, individuals who have not developed two core competencies of value-driven and self-directedness in their learning may act passively towards new opportunities and, therefore, cannot learn how to learn and manage their careers. These inabilities of individuals to manage their careers will cause hardship and will predominantly rely on luck rather than differentiation. Additionally, these individuals are driven by financial incentives and fail to recognize how they can set themselves up for success in their careers (Brisco & Hall, 2006).

To sum up, developing new skills and knowledge, including the skill of learning how to learn, are significant parts of career change that all individuals must develop. Therefore, I will explore how skilled immigrants learn through a career change. Studies show that skilled immigrants participate in formal or non-formal training to validate, recycle, enrich, or change their careers (Adamuti, 2010; Malik, 2017). Due to external or internal motivation, skilled immigrants pursue learning activities in various forms during their career trajectory in Canada. The following sections explain skilled immigrants’ career establishment in Canada, followed by learning theories that define how adults learn.

2.2 Skilled Immigrant in Canada

Skilled immigrants play a crucial role in the necessity of population growth and the success of Canada in the knowledge economy. In the last two decades, Canada has shown a desire to shift its immigration policies toward increasing its competitiveness globally by admitting more skilled immigrants than before (Andreson & Guo, 2009). In the early 1980s, most immigrants landed in Canada under the category of family reunification. However, this popular category was ranked down by the economic category in early 2000 (Statistics Canada, 2008). In 2014, the number of economic class immigrants increased by 11% compared with the last four years, while family class immigrants declined by 18% (OECD, 2016). According to Statistic Canada (2016), landed immigrants represent 21.9% of Canada's population, within which 16% percent of this number are recent immigrants of Canada who landed between 2011 and 2016.

Besides the role of immigrants in population growth, skilled immigrants are also active contributors to the Canadian economy. Half of all new immigrants who arrived in Canada between 2011 and 2016 possessed a bachelor's degree or higher (Statistics Canada, 2016). In 2017, while 74% of Canadian-born aged 55 and older acquired employment growth of this range, 60% of employment gains of the core working age (between 25 and 54) were accounted for by landed immigrants. In recent years, the majority of growth in immigrants' employment rate accounted for industries such as professional, scientific, and technical services and finance, insurance, real estate, rental, and learning (Statistics Canada, 2018).

Immigrants confront various barriers through their integration into Canadian society, which causes them issues such as unemployment or underemployment. Immigrants of Canada are selected by Immigration, Refugees, and Citizenship Canada (IRCC) to leverage their work

experience and knowledge to contribute to the Canadian labour market. However, they encounter systematic barriers while integrating with Canadian society and establishing their careers in Canada (Guo, 2010a; Lue & Chen, 2010; Heilbrunn et al., 2010; Yakushko et al., 2008). Ross (2018) pointed out the lack of English ability, cultural barriers, devaluation of immigrant's credentials, insistence on Canadian work experience, and the complexities of recertification as the main barriers that immigrant individuals face in the Canadian labour market. Guo (2013a) researched the immigration experience of 131 skilled Chinese immigrants in Calgary who landed in Canada less than five years ago. He reported barriers such as language difficulties (82%), lack of Canadian work experience (69%), non-recognition of Chinese qualification (40%).

Studies have illustrated that skilled immigrants' prior education and work experience have been devalued and discounted by the foreign credential assessment in Canada (Boyd & Thomas, 2001; Bauder, 2003; Guo, 2013b, Sinacore et al., 2009). A result of a survey in 2007 indicated that 50% of immigrants found it difficult to start their first proper job in Canada. Among these immigrants, 50% specified a lack of Canadian work experience, 37% identified the non-recognition of foreign background, and 35% mentioned their foreign qualifications were not accepted (Schellenberg & Maheux, 2007). As soon as immigrants land in Canada, they find their credentials and work experience "unrecognized" or "undervalued" (Guo, 2010b). Although they possess valuable professional work experience from their home countries, their targeted employers, mostly, Canadian require work experience that they do not maintain. Therefore, they are primarily forced to seek retraining or re-accreditation to get their credential recognized (Bauder, 2003; Hakak et al., 2010; Lau, 2010). This process imposes extra cost and time that make the process of their integration into the Canadian workplace complicated.

Girard (2010) depicted that “language, along with problems assessing foreign training and work experience” (p. 7), are primary reasons by which Canadian employers may prefer to recruit Canadian-born candidates over immigrants. Guo and Shan (2013) refer to competition between immigrants and the increasing number of post-secondary participation among the Canadian-born as a reason behind “the decentralized, arcane and idiosyncratic accreditation system” (p. 467) of Canada. As the results of devaluation of foreign credentials, unemployment and underemployment, downward social mobility, poor financial performance, and poor mental health issues are prevalent among new skilled immigrants in Canada (Guo, 2013b; Lue, 2010).

Because of unemployment and underemployment of new immigrants in Canada, they endure financial constraints. Studies have proven a wage gap between skilled immigrants and native-born Canadians (Picot, 2004; Alboim et al., 2005; Reitz, 2005). Further, Girard (2010) attributed this wage gap to the poor recognition of foreign credentials by employers, regulatory bodies, government agencies, and postsecondary institutions. After comparing pre- and post-arrival employment experiences of Chinese immigrants in Calgary, Guo (2013a) depicted that the annual income of more than 38% of participants was below \$20,000, which is lower than the poverty line. In contrast, only 16% of the Canadian population is considered low-income. Moreover, immigrants’ employment quality differs from that of Canadian-born workers, which could be attributed to the unrecognized skills by credential assessment of employers or other organizations. Altogether, these career-seeking barriers and other occupational barriers affect the career establishment of immigrants in Canada and disrupt their lifelong learning pathway toward building a career in Canada.

New immigrants of Canada confront barriers through their first job in Canada. However, immigrants who have been in Canada and already found a professional job still face issues

toward their career development. Guo (2010a) attributes a triple glass effect metaphor to institutional racism as barriers that skilled immigrants encounter during their integration. The triple glass effect combines three glass gates, glass doors, and glass ceiling layers. The glass gate represents barriers that prevent skilled immigrants from accessing regulated occupations. The second layer, the glass door, restricts their access to high-wage firms' employment. The third level, the glass ceiling, typifies barriers that hinder employed professional immigrants from management and higher positions in organizations.

The prosperity of the Canadian economy within the context of the global knowledge economy is intertwined with the employment performance of immigrants. The Statistic Canada (2018) projects that the percentage of landed immigrants in Canada would rise between 24.5% and 30% by 2030. Therefore, the contribution of skilled immigrants to Canada's population growth and its economy continues to increase. Yet, immigrants' employability and vocational-related learning are impacted by the career development trajectory in Canada. On top of issues as an immigrant in Canada, they still must learn how to develop their metacognitive skills to accomplish a successful career change.

Since there is a lack of research on immigrants' employability and career change at a time of crisis, I explore successful career changes of immigrants who have learned how to learn. This research aims to shed light on the learning experiences involved with the career change process of immigrants from the lens of adult learning theories.

Before I explore the two most essential learning theories that inform this research, I elaborate on the definition of learning in the adult learning field. Since the 1970s, scholars in the adult learning field have presented various learning models to describe how adults learn. The concept of andragogy by Knowles (1980), Illeris's (2006) model that defines three dimensions of

learning, experiential learning model of Kolb (1984), various models of self-directed learning, and transformative learning theory of Mezirow (1991) are some of the essential models presented in the field of adult learning.

Among all these models of learnings, Jarvis (2007) has presented a comprehensive and holistic adult learning model in which adult learning is:

The combination of processes throughout a lifetime whereby the whole person—body (genetic, physical, and biological) and mind (knowledge, skills, attitudes, values, emotions, beliefs, and senses)—experiences social situations, the perceived content of which is then transformed cognitively, emotively, or practically (or through any combination) and integrated into the person's biography resulting in a continually changing (or more experienced) person.

(p.13)

Jarvis's model situates the learner in the center of the learning process as a whole person whose body, the mind, is involved in the process. According to his model, learning starts with an experience that could be in harmony with the whole feeling, belief, perspectives, emotions, attitudes, values, knowledge, and skills. Whereas it may appear as an unexpected one in which the learner does not have enough toolkits to handle it. In the first situation, the experience has repeatedly occurred, therefore, does not result in specific learning. On the other hand, the second situation is where the disjuncture takes place: "disjuncture occurs when our biographical repertoire is no longer sufficient to cope automatically with our situation so that our unthinking harmony with our world is disturbed to some degree or other" (Jarvis, 2006, p. 9). Indeed, when a disruptive event happens, individuals would not be able to rely on their previous learning and skills; therefore, they have to think and plan new knowledge and skills to acquire a new harmony

with their environment at a different level. Whereas, once the learner chooses not to address the disjuncture with the whole world, learning would not initiate for this individual.

Once learning is initiated due to disjuncture events, the learner chooses three possible ways of emotion, thought reflection, and action or a combination of these to acquire new knowledge and skillsets. These ways of learning may channel in critical thinking, problem-solving, reflective learning, reflection on emotions, or experimental learning (Jarvis, 2006). The outcome of this learning model is a learner who is “more experienced, more able to cope with similar situations, and problems because of the learning that has occurred” (Jarvis, 2006, p. 17). In the next section, I explore self-directed learning and transformative learning as two significant theories of adult learning that explain the relationship between learning how to learn and succeed in the career change of immigrants.

2.3 Self-directed Learning

Self-directed learning is a process in which individuals take responsibility for their learning and use their resources to pursue their learning goals. Many scholars have widely researched this concept in the past few decades. Yet, it is one of the most challenging theories to contextualize by researchers in the field of adult learning, psychology, and cognitive science. In adult learning literature, self-directed learning has been referred to by different labels; independent learning, self-planned learning, self-instruction, autonomous learning, self-teaching, self-study, self-education, discovery learning, and inquiry method (Guglielmino, 1989). Initially, the self-directed learning of adults was empirically examined by Tough (1979), a Canadian researcher, who explored the self-learning of participants through “The Project.” He identified

that adults could initiate learning to confront problems and challenges in their surrounding context. Knowles (1975) defined self-directed learning in the following way:

Self-directed describes a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes (p. 18).

Knowles (1980) attributed the development of self-direction to the natural physiological and metacognitive process of maturity, reflecting that as adults mature, they naturally engage in self-directed learning activities. However, in the later theoretical models, scholars concluded that the self-direction of adults could vary based on their willingness, motivation, and life circumstances (Brockett & Hiemstra, 1991; Candy, 1991; Merriam & Bierema, 2018, Pratt, 1988). Further, Caffarella (1993) indicated that self-directedness is an inherited quality. How adults act as self-directed learners more generally depends on four factors: a) level of technical skills, b) familiarity with the subject matter, c) sense of personal competence as learners, d) and the context of the learning event. Yet, adults may avoid pursuing self-directed learning in some contexts, demonstrating unwillingness or a lack of capacity to accept responsibility for their learning (Owen, 2002). Therefore, it is essential to see when and how adults take responsibility for their learning in response to various external factors such as digital transformation in the workplace, abrupt changes in their roles and employment, layoffs, and urgent needs for learning new skills.

The primary significance of self-directed learning is that adult learners are responsible for planning, executing, and evaluating their own learning experience (Caffarella, 1993). Brockett

and Hiemstra (1991) interpreted the notion of an individual's responsibility as "assuming ownership for their thoughts and actions as well as the consequences of their actions" (p. 26). They correlated responsibility with the autonomy of adults presented by Chen (1983), who defined it as an individual's ability to be "free in regard to established rules or norms, to set the goals of one's action and to judge its value" (p. 7). As reflected on the concept of autonomy, they pointed out that as adults autonomously set their goals and plan for them based on their values and beliefs, they take responsibility for their actions to achieve these goals. Self-direction of adults means they take responsibility for what, where, and how they learn in the context that they reach out to others for feedback, insights, and reflections. Therefore, despite the external and internal factors that affect the learning of adults, adult learners must become responsible and carry on autonomous behaviour or the set of values to overcome barriers and achieve goals.

While self-directed learning is the core concept of adult education, and the self-directed learner is mainly responsible for their learning, this does not mean that the learning of adults takes place in an isolated environment or outside a social context. Learning happens through a social context and is mainly triggered by a change in the life of adults. Indeed, learning is a "response to one's situation in life and that the particular stage in one's life becomes the context for learning" (Raberson & Merriam, 2005, p. 47). They illustrated that changes in the life of adults could trigger motivation and interest in adults to become self-directed and pursue their learning goals. Therefore, adult learning initiates with a change in their social context and continues while they interact with it.

Merriam, Caffarella, and Baumgartner (2007) classified all theoretical models of SDL as a process in linear, interactive, and instructional categories. In terms of categorizing the linear learning model of Knowles (1975), they presented six significant steps of Knowles' model that

individuals experience to reach their learning goal; “(1) climate setting, (2) diagnosing learning needs, (3) formulating learning goals, (4) identifying human and material resources for learning, (5) choosing and implementing appropriate learning strategies, and (6) evaluating learning outcomes” (p. 134). Through a learning project with participants, Tough (1978) also proposed a similar linear model in which he argued that adults could initiate self-learning outside the formal educational context. While models of Knowles (1975) and Tough (1978) formed an excellent foundation for the following models of self-directed learning, they did not explore the complexity of self-directed learning in different settings and contexts (Banz, 2008).

The interactive theoretical models, however, conceptualized other factors and contexts. These included characteristics of learners, opportunities that learners possess in their learning environment, cognitive learning processes, and the context of the learning environment, which may affect the progress of learning (Merriam, Caffarella, & Baumgartner, 2007). There are two illuminating examples of interactive theoretical models that are significant in the context of self-directed learning: Garrison’s (1997) cognitive model with the three dimensions of self-monitoring, self-management, and motivation, and Brockett and Hiemstra’s (1991) PRO model, with three dimensions of person, process, and context. On the other hand, the core concept of theoretical instructional models provides a facilitation framework to guide educators of learners in formal settings. Grow’s (1991) staged self-directed learning model is the most popular one, which provides educators with a guideline on the learning stage for the learners.

Self-directed learning theorists have consistently debated self-directed learning goals (Brockett & Hiemstra, 1991; Brookfield, 1986; Collins, 1988; Mezirow, 1985). Caffarella (as cited in Merriam & Bierema, 2018) comprehensively categorized all various self-directed learning models and suggested that it aims to fulfill four main goals. The first goal is to build up

the capability of adult learners to become more self-directed in their own learning. The second goal is to enhance their transformational learning since critical reflection is part of the learning process. The third goal is to gain new skills and knowledge. The last goal advocates for emancipatory learning to support social justice and political actions.

2.3.1 Self-directed Learning Motivation

Adults' motivation in learning has been well researched in the field of psychology. In this part, I mainly focus on the motivation factors that have been explored in the field of adult learning. Indeed, learners' motivation influences the effective initiation and consistency of learners' commitment toward the process of learning. Garrison (1997) provided perspective toward motivation in his self-directed learning model; "motivation reflects the perceived value and anticipated success of learning goals at the time learning is initiated and mediates between context (control) and cognition (responsibility) during the learning process" (p. 21). Accepting responsibility for learning takes internal states and external conditions. Garrison indicated that motivation in self-directed learning is in two parts; entering motivation that is "the process of deciding to participate," and task motivation that is "the effort required to stay on task and persist" (p. 22) and is closely connected with self-management and control to sustain learning intention through the learning process. According to his model, participation of individuals in self-learning is ignited with entering motivation in which individual is involved with the process of decision and goal setting. Indeed, individuals will have higher entering motivation for learning once they align their learning goal with their needs. According to the Garrison model (1997), valence and expectancy are two major entering motivational factors; personal needs and values and preferences are influential factors toward valence, in which the learner evaluates the learning

goal based on their needs, values, preferences. Garrison (1997) delineated expectancy as “the belief that a desired outcome can be achieved” (p. 23) and is driven by personal and contextual characteristics.

Deci and Ryan (2000) associated the motivation of individuals with the need theory in which three psychological factors of competence, autonomy, and relatedness are influential toward the continuous learning commitment of individuals. According to their definition, need is “innate psychological nutrients that are essential for ongoing psychological growth, integrity, and well-being” (p. 4). The literature concerning motivation theory refers to the need for competence as a situation in which individuals pursue and conduct activities involved with their environment with confidence and effectiveness. The need for autonomy is associated with the capacity and desire to choose and act in activities relevant to professional and personal lives. Relatedness refers to a sense of belonging and connection individual experience with a group of people who share the same values, practices, norms (Krapp, 1999; Niemiec & Ryan, 2009; Vallerand & Reid, 1984; Vansteenkiste et al., 2004; White, 1959). Fulfillment of these three needs results in individuals' psychological growth, integrity, and well-being. Whereas once these needs are not met, it may negatively impact individuals' well-being, motivation, and performance in the context of their environment (Deci & Ryan, 2009). According to their theory, if a learning activity serves one or all the competency, autonomy, or relatedness needs, there is more chance that the individual actively engages in that learning activity and becomes motivated to continue it.

In a comprehensive continuum model of human motivation, Deci and Ryan (2000) laid out three primary types of motivation: amotivation, extrinsic motivation, and intrinsic motivation. Amotivation is “the state of lacking an intention to act.” Once an individual is

amotivated, they may not align values with the outcome of a learning activity or may not feel competent to initiate it. Besides that, extrinsic motivation refers to conducting an activity solely for the sake of an outcome, reward, or external pressure associated with the activity. On the other hand, intrinsic motivation refers to the state that an individual pursues an activity because it is “inherently interesting or enjoyable” (Deci & Ryan, 1985). Through this motivation continuum, internalization and integration of values and individuals’ perspectives increase accordingly. The rise in internalization is closely associated with the sense of personal commitment. Therefore, the more a person is intrinsically motivated, the more they will internalize and integrate values and become more persistent and optimistic throughout the progress of their self-learning (Deci & Ryan, 2000).

2.3.2. Self-directed Learning as a Process and Personal Attribute

The literature reveals different interpretations and models of self-directed learning, informed by a constructivist, behaviourist, or humanistic epistemologies (Caffarella, 1993; Candy, 1991; Leach, 2005). These various approaches may consider learning as either a process or a personal attribute. Oddi (1987) also called these two perspectives a learning process perspective and personality perspective. While persona attribute refers to the characteristics of a learner, the learning process is a self-initiated process of learning that reflects the ability of individuals to plan and manage their learning, which can occur inside or outside of formal instructional settings (Caffarella, 1991). Likewise, in the Personal Responsibility Orientation model (PRO) proposed by Brockett and Hiemstra (1991), they also determined self-directed learning as the characteristics of learning and learner self-direction as the learner’s

characteristics. Fellenz (1985) distinguished between the learning process and personal development aspect of self-directed learning, indicating that:

Either as a role adopted during the process of learning or as a psychological state attained by an individual in personal development. Both factors can be viewed as developed abilities, hence, analyzed both as to how they are learned and how they affect self-directed learning efforts. (p. 164)

In the following parts, I explore the characteristics of each perspective of self-directed learning accordingly. Concerning self-directed learning as a personal attribute, I explore the motivation and characteristics of learners, such as readiness, autonomy, and capabilities of learners. In the section for self-directed learning as a process, I review the self-management and self-monitoring of individuals throughout a learning process.

2.3.3. Personality Characteristics of Adult Learners

Researchers have shown that successful adult learners possess a high degree of psychological and personal characteristics (Brockett and Hiemstra, 1991; Candy, 1991; Guglielmino, 1989). These characteristics influence their willingness to initiate their learning (Merriam, 2018). Therefore, it is essential to identify and nurture these characteristics for adults to become highly self-directed learners committed to their progress. Candy (1991) is one of the researchers who delineated the characteristics of learners through the process of self-direction by examining 20 studies that empirically explored characteristics of self-learning. According to his analysis, a self-directed learner is:

methodical and disciplined, logical and analytical, reflective and self-aware, demonstrate curiosity, openness, and motivation, flexible, interdependent and

interpersonally competent, persistent and responsible, venturesome and creative, confident with self-concept while the learner also have knowledge and skills of learning how to learn, develop and use defensible criteria for evaluating learning, and have developed information seeking and retrieval skills. (p. 130)

In an attempt to revise the PRO theoretical model, Brockett and Hiemstra (2012) also pointed out creativity, critical reflection, enthusiasm, life experience, resilience, and previous education as characteristics of individuals self-learners. Oddi (1986) indicated cognitive openness as the primary characteristic of highly self-oriented learners by which “the learner is open to new ideas and activities, ability to adapt to change, and tolerance of ambiguity” (p. 99).

Guglielmino (1987) conducted empirical and quantitative research and concluded that skillful self-learner is

the one who exhibits initiative, independence, and persistence in learning, one who accepts responsibility for his or her own learning and views problems as challenges, not obstacles; one who is capable of self-discipline and has a high degree of curiosity, one who has a strong desire to learn or change and is self-confident, one who is able to use basic study skills, organize time and set an appropriate pace for learning, and to develop a plan for completing work, one who enjoys learning and has a tendency to be goal-oriented. (p. 73)

The outcome of Guglielmino’s (1987) quantitative research provided a framework called Self-Directed Learning Readiness Scale (SDLRS) that others have vastly researched through decades. While many researchers criticize this readiness for self-directed learning scale, it has provided profound perspectives on the necessary psychological qualities of self-learners who initiate and maintain their learning.

2.3.4. Self-directed Learning as a Process

As I mentioned before, various theoretical models described the process of self-directed learning in three linear, interactive and instructional models. Through these, there are three concepts, self-management, self-monitoring, and reflection, that are related to the context of individual participants of my research, and I explore them in the following sections. As Individuals interact with their social contexts, they find gaps in their knowledge and skills and perform self-management, self-monitoring, and self-reflection to progress throughout their learning.

2.3.4.1 Self-management

Self-management has primarily been outlined in the interactive theoretical models of Garrison (1997) and Candy (1991). It pertains to the skills and competencies of learners that influence the process of learning. According to Garrison (1997), self-management is associated with goal settings and metacognitive strategies and reflects external activities that ensure “the enactment of learning goals and the management of learning resources and supports” (p. 25). It involves assessing learning tasks, learning methods, and outcomes of learnings that provide control over the learner’s learning process. In the self-directed learning process, individuals take the responsibility to take control of their learning by managing their resources, getting feedback from others to manage their method of learning, and continuously assessing their learning.

In the theoretical model of Garrison (1997), he outlined three factors that influence the self-management of learning. These factors consist of proficiency that reflects the competency and skills of the learner, resources that reflect all materials and opportunities of the learner’s environment, and interdependence that reflects the learner’s choices and integrity throughout the

process. Overall, taking responsibility for contextualizing what, where, and how individuals learn reflects how adults self-manage their learning.

Candy (1991) defined self-management as “the willingness and capacity to conduct one’s own education” (p. 23). Indeed, he considered self-management as a subset of personal autonomy in which “a person who is autonomous would be both willing and able to exert a degree of control over aspects of his learning situation” (p. 20). Other than pointing out specific learning skills, Candy (1991) emphasized the metacognitive awareness or conscious control development of learners over their learning skills and activities as a significant competency in learners’ self-management. Increasing awareness of learners could lead to more personal control over learning.

2.3.4.2. Self-monitoring

Self-monitoring is the cognitive and metacognitive aspects of the self-directed learning process associated with reflecting on assumptions and the learning itself (Merriam & Bierema, 2018). The metacognitive aspect of learning refers to knowledge about the learning process, monitoring of the process and outcome, and control over the learning process and outcome (Serra and Metcalfe, 2007). Self-monitoring calls for observation of the learning process while examining the results (Goulão & Cerezo Menendez, 2015). Garrison (1997) included self-monitoring in his self-directed learning model as the process by which the learner has the obligation and commitment to construct meaning and integrate new concepts with previous knowledge. He defined it as the learning process in which the learner “ensure new and existing knowledge structures are integrated in a meaningful manner, and learning goals are being met” (p. 24).

Self-monitoring involves self-reflection as well as feedback in dialogue from others. Yet, it is up to the learner to integrate feedback and self-reflection into the existing knowledge and construct new meaning. By self-monitoring through two types of external and internal feedback, the learner exercises cognitive and metacognitive aspects of learning and turns the learning plan into action while examining the outcome of the action (Goulão & Cerezo Menendez, 2015).

Mezirow (1991) identified three types of reflection. Content reflection refers to what we feel, think, or act out of an experience, process reflection refers to strategies on how we deal with the experience and solve the problem associated with the experience, and premise reflection refers to “becoming aware of the why we perceive, think, feel or act as we do” (p. 108). When it comes to premise reflection, individuals become critical thinkers of their assumptions and ask questions about themselves and their knowledge. That is where the assumptions of the learner could transform.

In terms of the relationship between self-directed learning and the transformation of perspectives, Brockett and Hiemstra (1991) refer to Mezirow’s direction that self-direction is associated with perspective transformation. Both are related to critical thinking and critical reflection, and both are a process that involves analyzing a problem or situation. In the next part, I explore the core values of transformative learning theory.

2.4. Transformative Learning Theory

Transformative learning has been vastly researched by scholars since the 1980s and has received considerable scholarly attention. This theory is concerned with changes in the knowledge and perspective of adults while they conduct self-reflection and critical reflection on their experiences. Kegan (2009) distinguished transformative learning from informational

learning. Informational learning is about changes in *what* we know and adds more knowledge to the content of existing ones, while transformative learning is about changes in *how* we know. Gunnlaugson (2008) categorized theories of transformative learning into first waves and second waves. The first wave includes approaches that are either inspired by Mezirow's (1978) transformative learning theory or developed based on critiques about this theory. The second wave refers to approaches that try to depart from Mezirow's perspective and provide a holistic, integrative, and integral theoretical perspective. The first wave mostly has an inquiry on *how* adults experience transformative learning. The second wave theories explore *what* form of transformative learning they experience and in *which* context of individuals' lives transformative learning occurs (Gunnlaugson, 2008).

Through a study of women who returned to college, Mezirow (1978) conceptualized his first revision of transformative learning through this research. His transformative learning theory evolved through the years, as he called it a "theory in progress" (Mezirow, 1991). His model was influenced by the perspective transformation of Freire (1970), three learning domains of Habermas (1971), and Kuhn's (1996) paradigm shift. He defined the process by which "we transform our taken-for-granted frames of reference to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so they may generate beliefs and opinions that will prove more true or justified to guide action" (Mezirow & associates 2000, p. 7- 8). This learning process starts with an experience and involves steps that engage critical reflection on that experience to gain a new set of knowledge and perspectives (Brown & Posner, 2001).

Transformative learning is the process that our assumptions, premises, and our interpretation of experience and perspective toward the world would improve by applying critical

self-reflection and reflective actions (Cranton, 1994). The process “begins with a dilemma and moves forward as distorted assumptions in meaning structures become transformed through critical reflection” (Mezirow, 1991, p. 148). It involves stages of profound examination, questions, validations, and revisions on individuals’ meaning schemes and meaning perspectives (Mezirow, 1991). With a constructivist perspective, Mezirow (1978) considered that our meaning-making of an experience is based on our perceptions developed from our experiences.

Learning occurs through three learning domains of instrumental, dialogic, and self-reflective orientation (Mezirow, 1985). Instrumental learning is deductive and task-oriented problem solving to control the environment; it is about how to do a task rather than asking why to do it. Dialogic learning is how we try to make meaning of others’ perspectives, premises, and beliefs in our conversations and learn that knowledge results from self-reflection (Mezirow, 1991). Self-reflective learning is an understanding of ourselves in which knowledge is “appraisive” (Mezirow, 1985). Through these learning domains, individual learners may critically reflect on the process, content, and premise that may transform their perspective.

Throughout Mezirow’s transformative learning development, he equated frame of reference as a meaning perspective. He defined it “as the structure of assumptions and expectations through which we filter sense impressions” (Mezirow & associates, 2000, p. 17). Through our assumptions, we understand and interpret our surrounding world. There are three types of frames of reference. Sociolinguistic frame of reference is about social norms and culture, the epistemic one is about knowledge and how it applies, and the physiological one is about the self (Cranton, 1994). Two dimensions of the habit of mind and point of view shape the frame of reference. A habit of mind is “a set of assumptions—broad, generalized, orienting predispositions that act as a filter for interpreting the meaning of experience” (p. 17). The point

of view is originated from the habit of mind. It consists of meaning schemes that are “sets of immediate, specific beliefs, feelings, attitudes, and value judgments” (Mezirow & associates, 2000, p. 18). We see the world through the lens of our habit of mind that is based on “our background, experience, culture, and personality” (Cranton, 2006, p 25). These sets of meaning schemes act outside of our awareness; therefore, they order a set of actions that we follow automatically if the critical reflection is not involved (Mezirow & associates, 2000).

When learning occurs, four possibilities happen to our frame of reference; it elaborates our frame of reference, we learn a new frame of reference, our point of view is transformed, our habit of mind is transformed. Mezirow (1991) defines the transformation of perspective:

the process of becoming critically aware of how and why our assumptions have come to constrain the way we perceive, understand, and feel about our world; changing these structures of habitual expectation to make possible a more inclusive, discriminating, and integrative perspective; and, finally, making choices or otherwise acting upon these new understandings. (p. 167)

Critical reflection is the key to transforming our frame of reference and making changes to either our habit of mind or point of view. Throughout dialog and reflection learning, it is possible to examine the point of view of others and transform it into our tacit point of view. With critical reflection on premise, the learner asks questions about “the integrity of deeply held assumptions and beliefs based on prior experience” (Taylor, 2009, p. 7). Once the frame of reference is transformed, it is more “(a) inclusive, (b) differentiating, (c) permeable, (d) critically reflective, and (e) integrative of experience” (Mezirow, 1996, p. 163).

Mezirow (1991) suggested ten steps of transformative learning theory that were later revised or developed by him. Merriam, Caffarella, and Baumgartner (2007) categorized

Mezirow's model steps in four significant contexts: experience, critical reflection, reflective discourse, and action. In table 1, I illustrated these steps based on these four major themes.

Table 1 Four Major Transformative Learning Themes based on the Mezirow’s 10 step model (1991)

Experience	1. A disorienting dilemma
Critical Reflections &/or Reflective discourses	2. Self-examination with feelings of fear, anger, guilt, or shame 3. A critical assessment of assumptions 4. Recognition that one’s discontent and the process of transformation are shared 5. Exploration of options for new roles, relationships, and actions 6. Planning a course of action 7. Acquiring knowledge and skills for implementing one’s plans
Action	8. Provisional trying of new roles 9. Building competence and self-confidence in new roles and relationships 10. A reintegration into one’s life based on conditions dictated by one’s new perspective.

(1991). Adapted from Merriam, Caffarella, and Baumgartner’s categorization (2007).

Individuals could experience steps 2 to 7 by practicing critical reflection, reflective discourse, or both. It is worth mentioning that the process of transformative learning occurs mainly in a spiral manner rather than a linear one (Cranton, 2002). In the revision of the model, Mezirow (2000) indicated that the transformative learning experience of individuals might occur based on some of the steps. It might be out of the exact sequence of the model, and it happens in a spiraling order. Additionally, Mezirow (1991) highlighted that the process of transformation might not always result in a specific or successful outcome since it involves “negotiation, compromises, stalling, backsliding, self-deception, and failure” (p. 171).

The beginning of the process is associated with an experience that is not according to individuals’ previous experiences or frames of reference. Individuals cannot resolve the problem based on their previous experiences or with the help of their current perspective; that is where the

process of critical reflection being open to new assumptions would help individuals move forward with learning or changing their perspectives. It is worth mentioning that not all disorienting experiences nor major learning from experience are transformative. Individuals may deny the situation and do not take action to resolve it with a new perspective.

The second major theme is about critical reflection on assumptions represented from experience. Throughout steps of this theme, individuals go through a reflective examination of beliefs, attitudes, and perspectives constructed and interpreted from experience. Indeed, Mezirow (1991) distinguished between informational learning and transformational learning: “we can learn simply by adding knowledge to our meaning schemes or learning new meaning schemes” (p. 223). Therefore, to initiate transformation, the learner must examine one self’s assumptions and beliefs while critically reflecting on assumptions, beliefs, and feelings. Mezirow explained critical reflection as “the habitual way that we have interpreted the experience of everyday life to reassess rationally the implicit claim of validity made by a previously unquestioned meaning scheme or perspective” (Mezirow 1991, p. 102).

Individuals get involved in the third theme of transformative learning to validate new assumptions and meaning-making. They engage in reflective discourses to reach out to various opinions to test new meaning and conclude the best possible judgment. Mezirow (2000) defined discourse as “dialogue devoted to searching for a common understanding and assessment of the justification of an interpretation or belief” (p. 11). Discourse is also engaged with the critical assessment of feelings and values. To achieve the most effective reflective discourse to understand the new meaning better, Mezirow (2000) recommended some ideal conditions. These conditions include access to accurate and proper information, being free from self-deception, staying open to alternative points of view, being capable of assessing argument objectively and

achieving awareness of ideas' context. Under these conditions, individuals can assess and understand how others interpret their experiences and analyze other people's reasons rooted in their beliefs and values.

Taking reflective actions is the step that a learner plans to perform in the process of transformative learning. These actions could be "immediate action, delayed actions, or reasoned reaffirmation of an existing pattern of action" (Mezirow, 2000, p. 24). Based on the new frame of reference, the learner is motivated to perform collective actions toward their needs.

2.5. Summary

To sum up, in this chapter, I reviewed the literature of career in the concept of 21st century, skilled immigrants in Canada, and analyzed two theories of self-directed learning and transformative learning through the lens of adult learning literature. These two theoretical frameworks are a great fit to elucidate how skilled immigrants navigate their career change while encountering uncertainty throughout their career development in Canada. The literature review reveals that more research is needed to explore the career change experience of skilled immigrants in the age of digital transformation and at the time of economic crisis.

Chapter Three: Methodology

For this study, I decided to apply a qualitative case study to explore the learning experience of skilled immigrants who had a successful career change to a new industry of their choice. These individuals successfully developed metacognitive learning skills and modified attitudes to deal with future career uncertainty caused abrupt changes in their environment. Therefore, by applying a qualitative case study, I investigated motives, values, attitudes, perspectives, self-direction, and self-management practices regarding their vocational learning needs. In designing this research, I gathered data through the one-on-one interview and focus groups with research participants according to qualitative case study research methodology. I believe this methodology was the best fit that addressed my research questions listed below:

1. What are the external and internal factors that motivated skilled immigrants to initiate a career change?
2. What are the learning strategies that skilled immigrants developed for a career change?
3. How has self-directed learning contributed to the success of their career change?

In this chapter, I explained the rationale of choosing a qualitative study based on the underpinning philosophical assumptions of this current research. I also explored the case study literature and elaborated my reason for selecting a qualitative case study as this research methodology. Further, I illustrated the research design of this study that includes a selection of participants, the researcher's role, data collection methods, and data analysis. Finally, I discussed the issue of trustworthiness and ethical consideration of the current study.

3.1 The Qualitative Research Approach

Qualitative study is one of the most common research methodologies used in adult education and social studies (Taylor, Beck, & Ainsworth, 2001). Qualitative research is informed by the notion that “meaning is socially constructed by individuals in interaction with their world” (Merriam, 2002, p3-4). It is interested in the meaning-making and interpretation of individuals and the researcher from a particular context or experience. Indeed, Qualitative research is predominantly associated with constructivism’s philosophical paradigm. Crotty (1998) described constructivist worldview as “the view that all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of the interaction between human beings and their world, developed and transmitted within an essentially social context” (p. 42).

Additionally, Creswell and Creswell (2018) explained that “Social constructivists believe that individuals seek understanding of the world in which they live and work. Individuals develop subjective meanings of their experiences— meanings directed toward certain objects or things” (p. 8). Constructivism epistemology delineates that knowledge is subjective and transferable; “meaning comes into existence in and out of our engagement with the realities in our world. There is no meaning without a mind. Meaning is not discovered but constructed” (Crotty, 1998, p. 9).

My perspective for the research design of this study is situated within the constructivist paradigm. I collected and analyzed data from participants while I considered that “the world is not the fixed, single, agreed upon, or measurable phenomenon that it is assumed to be in positivist, quantitative research. Instead, there are multiple constructions and interpretations of reality that are in flux and that change over time” Merriam (2002, p. 3-4).

Four characteristics are attributed to qualitative research methodology (Creswell & Creswell, 2018; Merriam, 2002). Firstly, the focus is on the process of qualitative study, which is meaning-making by participants and the researcher. Merriam (2002) indicated that qualitative research is interested in “understanding how people interpret their experience, how they construct their worlds, and what meaning they attribute to their experience” (p. 6). Knowledge is socially constructed through the perspective of individuals from their own experience and the researcher’s interpretation from the subjective meaning-making of individuals. Through different methods of inquiry, including interviews, focus groups, document review, and observation, qualitative research design enables a qualitative researcher to construct meaning from the experience of individuals. It interprets how people live and react in the context of a phenomenon (Merriam & Tisdell, 2016). A qualitative researcher does not intend to discover an objective or single knowledge associated with an experience or event. Instead, the qualitative researcher constructs meaning from multiple interpretations of that event or experience. As knowledge is multiple, changing, and complex (Creswell, 2007; Merriam, 2009), construction and assessment of knowledge is possible through the interaction between the qualitative researcher and participants.

The second significant characteristic attributed to this methodology is that it involves an inductive research strategy. Despite the quantitative research driven by hypotheses being investigated deductively through the research process, quantitative researchers work toward forming hypotheses and concepts by constructing meaning and analyzing data-driven out of the method of inquiry (Merriam & Grenier, 2019). This does not mean that the qualitative researcher initiates the process with a blank mind (Merriam, 2009). For this study, my research design was

informed by two theoretical frameworks of self-directed learning and transformative learning, which guided me to properly structure the inquiry and data analysis.

The third characteristic of qualitative research is that it is descriptive. Having words, various perspectives, pictures, and data in the form of notes, observations, interviews rather than only numbers would highly equip the researcher to explore the phenomenon extensively. Therefore, the qualitative research outcome could be richly descriptive by examining various data sources. Lastly, the researcher is the “primary instrument for data collection and analysis” (Merriam 2009, p. 15). Because of the human capacity to analyze information, the researcher can ask open-ended questions and pivot the flow of the interview, observation, or other methods of inquiry by instantly analyzing data while encountering unusual or unexpected responses (Merriam, 2019).

Qualitative research design focuses on understanding participants’ perspectives about their experience while it might be a past event that is not accessible for observation of the researcher. Moreover, this research design could enable the researcher to inductively gather data from various interviews and focus group sessions and build concepts and theories. In brief, I intended to understand the learning experience of skilled immigrants through a career change, how they felt about changes around them, and how they perceived these changes and embraced them to turn them into motivation for a new learning journey. Since the purpose of this study is to generalize a process from participants’ experience, a qualitative design of this study enabled me to explore and reveal multiple realities embedded in the participants’ experience.

3.2 Case Study Research

The qualitative study comes with various research designs and methodology introduced, developed, and extensively used in the field of education, social sciences, human science, psychology, human resource management (Merriam & Tisdell, 2016). Patton (2015) examined sixteen different types of theoretical approaches to research inquiry. Denzin and Lincoln (2005) listed six approaches in their book chapters. Similarly, Creswell and Creswell (2018) presented five strategies: narrative research, case study, phenomenology research, grounded theory, and ethnography. Among all different approaches to qualitative research, Merriam (1998) calls the case study one of the most prevalent approaches that have been applied in the field of education. Indeed, the use of this research strategy initiated in education over 50 years evolved with significant changes in perspective toward the methodology of qualitative research in social studies (Denzin & Lincoln, 2005; Simons, 2009).

Different theorists have defined it because of the extensive application of case studies in various fields and different approaches. Putting these definitions together, they provide the essence of a qualitative case study in an overall view. Simons (2009) defines a case study as an “in-depth” research design that investigates a bounded project, program, or system from different perspectives in a “real-life” context. From the standpoint of Yin (1994), a case study is “an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (p. 18). Likewise, Creswell and Creswell (2018) illustrate it as qualitative research that is “a bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information (e.g., observations, interviews, audiovisual material, and documents and reports” (p. 73). These definitions highlight that case

study results are rich and descriptive because of an in-depth investigation of a well-bounded system.

Similarly, Baxter and Jack (2008) point out the case study as “an approach to research that facilitates exploration of a phenomenon within its context using a variety of data sources” (p. 544). Merriam (2009) defines it as “an intensive, holistic description and analysis of a single instance, phenomenon, or social unit” (p. 27). Likewise, Stake (1995) considers a case study as “the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances” (p. xi). These definitions of the qualitative case study indicate the process and characteristics of the case study while referring to it as a bounded system.

Like other qualitative research approaches, a qualitative case study is characterized by having the researcher as the primary data collection instrument and relying on an inductive research strategy. On top of these characteristics, scholars associate specific attributes to the qualitative case study. Therefore, I decided to choose the qualitative case study methodology because of some unique features that enable me to design proper research to address research questions. First, Yin (1994) recommended that a case study is a preferred research methodology once the research questions ask for “how” and “why” of the research phenomenon. Research questions of this study aim to explore a deeper understanding of how skilled immigrants learn through the process of a career change. Therefore, it resonates with the design of the case study.

Second, the philosophical paradigm that shapes the nature of qualitative case studies is informed by social constructivism. (Merriam, 2009; Stake, 1995). As mentioned before, I intended to explore and interpret the subjective knowledge driven from the experience of skilled immigrants and understand their learning of career change from their perspective. Thus, the philosophical underpinning of qualitative case study aligns with this research.

Third, a qualitative case study is an excellent methodology to apply once the boundaries between context and phenomenon of the research are not distinct (Yin, 1994). Similarly, Baxter and Jack (2008) also consider qualitative case study a good approach when a researcher aims to “cover contextual conditions because he/she believes they are relevant to the phenomenon under study” (p. 545). The phenomenon of this study was self-directed learning and transformative learning of skilled immigrants that occurred through a successful career change, and the context of the study was shaped by the digital transformation and abrupt changes in the workplace. Merriam (2009) considered knowledge derived from case study methodology concrete and contextual since it is coming from the experience of people and “rooted in context” (p. 45). This research methodology enabled me to have a profound understanding of the research phenomenon in the context of the digital age.

Finally, a qualitative case study is descriptive, intending to collect rich data and provide an in-depth understanding of the unit of analysis (case). According to Merriam (2009), a case study’s interest is “in the process rather than outcomes, in context rather than a specific variable, in discovery rather than confirmation” (p. 19). Further, a qualitative case study is “particularistic, descriptive, and heuristic and relies heavily on inductive reasoning in handling multiple data sources” (Merriam, 1988, p. 16). Characterized by a defined unit of study, a qualitative case study applies an inductive and in-depth data collecting strategy. Therefore, the result of a case study is descriptive and rich, which provides a “thick description of the phenomenon under study” (Merriam, 2009, p. 43).

To conclude, among all the qualitative research methodologies that I studied, I decided to apply the qualitative case study as the methodology of this research because its underpinning

philosophical paradigm, research questions, characteristics of my research context, and the purpose of this study resonate the most with it.

Two leading theorists of case studies, Yin (1994) and Stake (1995), have categorized qualitative case studies differently. Yin (1994) categorizes case studies into three explanatory, exploratory, and descriptive types. The explanatory case study is useful when the researcher seeks an accurate description of the case of study. However, the exploratory case study is a proper approach once the study phenomenon has no clear, single set of outcomes and requires future exploration. Finally, the basis of a descriptive case study is about the detailed description of the phenomenon and the real-life context of the research.

Additionally, Stake (1995) classifies the case study into three intrinsic, instrumental, and collective types. Once the research is interested in understanding a particular case rather than a phenomenon in a context, an intrinsic case study is a great approach. At the same time, an instrumental case study is useful when the purpose of the study is beyond understanding a particular case. In this type of case study, instead of having interest for the sake of a case, it explores the case to lay out in-depth insight into research phenomena within its context. A collective case study is recommended once multiple cases are considered in research design to have a collective understanding of the research outcome.

To clarify the methodological indication of this case study, an instrumental case study resonates the most with the research design of current research. Research participants are the case of study, and I explored their learning through a career change journey. However, rather than exploring their unique learning case, I investigated their learning to provide insight toward general learning of skilled immigrants that happened through a career change in Canada.

3.3 Researcher's Role

As I mentioned earlier, one of the characteristics of a qualitative case study is that the researcher is a key instrument for data collection and data analysis; therefore, the researcher can gather and analyze data and produce meaningful information (Creswell & Creswell, 2018). Indeed, this characteristic of qualitative study empowers the researcher to conduct data collection throughout nonverbal and verbal communications (Merriam, 2009). In terms of data analysis, “the human instrument can simultaneously analyze data as the data are being collected, adjustments in data collection can be made that may yield a more robust analysis and understanding of the phenomenon” (Merriam & Grenier, 2019, p. 5).

My interest in this research topic comes from my own career change experience as a skilled immigrant and my observation of immigrant communities throughout my work experience as a settlement and employment counselor at Immigrant Services Calgary. Additionally, I observed this type of pivotal journey among my professional network in Alberta. Throughout my years of work experience as a quality engineer in Calgary's Oil and Gas sector, I worked with many skilled immigrants who encountered various challenges and uncertainties in this sector to maintain their jobs and grow in their career path.

Because of globalization, global changes in the Oil and Gas market, and emerging technologies trying to automate traditional procedures in the Albertan Oil Sand industry, Alberta experienced one of the worst recessions in its history with a dramatic oil price drop. These abrupt changes resulted in significant layoffs, reduced working hours, decreased weekly earnings, and uncertainty of jobs for employees. At that time, I used to work in an international Oil and Gas company in Calgary, and I observed many professional immigrants felt the pressure of job insecurity because they were either laid off or closed to the possibility of it. At the same time,

they tried various pathways to secure a career for themselves. Some professional immigrants decided to take a combination of formal and informal training to diversify their professional skill set to adapt to the new situation.

I also decided to shift my career to the social sector, my field of interest, to leverage my professional work and volunteer mentorship experience and help other immigrants struggling throughout the tough time in the history of the Alberta economy. I started working as a settlement/employment counselor with Immigrant Services Calgary (ISC), funded by Immigration, Refugees, and Citizenship Canada (IRCC), to support newcomers and immigrants of Canada. My job was to intervene with skilled immigrants to help them navigate their careers and facilitate their career change in the Canadian workplace and society. Throughout this experience, I observed and supported many skilled immigrants who were uncertain about the future of their career, had to step out of their comfort zone, and start thinking about new training to find a job in a more stable sector than the oil and gas. As a settlement/employment counselor with one of the funded organizations to support immigrants in Calgary, I became aware of the career change constraints of skilled immigrants in Alberta. At the same time, these experiences mentioned above enabled me, as a researcher, to bring the necessary interpersonal skill set into this study.

Merriam (2009) specifies three traits necessary for the researcher of a qualitative study: tolerance for ambiguity, sensitivity, and communication skills. The qualitative research does not follow step-by-step guidelines or procedures; instead, the researcher requires the skills to encounter uncertainty and make pivotal decisions whenever necessary to change the interview direction to pursue meaning. Sensitivity is the second trait she considers essential for a qualitative research design in which the researcher must be sensitive toward all variables around

the context. Communication skills are the third trait that researchers require when applying through the process of data collection. Merriam (2009) indicates that “a good communicator empathizes with respondents, establishes rapport, asks good questions and listens intently” (p. 23). Likewise, Simons (2009) pointed out that establishing rapport with participants is vital toward gaining in-depth data collection.

Throughout my experience as a settlement/employment counselor of immigrants, I have developed strong interpersonal skill-sets to build rapport with people professionally. These developed interpersonal skills empowered me to have empathy and compassion with people, become an active listener who requires patience in hearing and understanding the meaning of what is being said by the interviewee, and become sensitive about the setting around me. In addition, as a person who shifted her career to a new industry, I have developed a skill set to face any uncertainty and take prompt steps while it is needed throughout the research process. These acquired skills from my work experience are beneficial for this qualitative study.

While the researcher’s role provides an opportunity for in-depth data collection and analysis, it raises criticism about too much subjectivity in the qualitative case study. Yet, scholars acknowledge the inherent subjectivity characteristics of qualitative study and recommend other ways to control research’s bias and subjectivity instead of eliminating it (Merriam, 2002; Simons, 2009). The qualitative study requires researchers to become aware of their subjectivity and how it may affect their study while systematically self-reflect and monitoring their study process (Peshkin, 2016). During this research study, I constantly reminded myself of my values and opinions about the process of career change by being reflexive of my actions and recording my reflections throughout the whole process of the research.

3.4 Recruitment of Participants

As I mentioned earlier, a case study is an in-depth research methodology of a bounded system. What makes a case study a unique approach is that it is more than “a choice of what is to be studied” (Stake, 2000, p. 443) rather than merely a methodology to follow. The case or the unit of analysis is a bounded system that could refer to “a program, event, activity, process, or one or more individuals” (Creswell & Creswell, 2018, p. 14). This study’s unit of analysis (case) was individual skilled immigrants who have successfully experienced a career change in Canada. Since I chose an instrumental qualitative case study, I was not particularly interested in the career change experience of each one of these individuals only. Instead, I explored their experience to gain insight into the context of a career change on skilled immigrants at a time of uncertainty.

Several scholars emphasized the essence of defining bounding the case, preventing data exhaustion (Merriam, 2009; Simon 2009; Stake, 1995; Yin, 2018). For the purpose of this study, potential participants were selected as Alberta residents’ skilled immigrants with a diverse ethnic background who possess a bachelor’s degree, as a minimum, and have landed in Canada between 5 and 10 years ago. These skilled immigrants had work experience out of Canada and worked in Alberta at least for one year in their previous career field before they accomplished a career change at a time of crisis. The unit of analysis of this research was bounded by location, time, and the credential of participants. I set Alberta as the location of this study since its industries have been under dramatic changes due to the last recession in Alberta and Canada, which makes it an unstable market and calls for developing diverse skill sets to increase employability. Further, time is another boundary of this study, where professional immigrants lived and worked in Alberta. Moreover, their credential, minimum bachelor’s degree, from their country of origin was another boundary of this study.

Upon receiving ethics approval from the University of Calgary Conjoint Faculties Research Ethics Board, I posted my research study on the Participate in Research initiative that the University of Calgary leads. Moreover, I posted the research recruitment poster on my LinkedIn page and social media of various ethnocultural community groups. Following posting the recruitment poster on my LinkedIn page, a few of my professional network shared the poster with their professional contacts and community groups and advocated for this research. Reaching out to different ethnic community groups enabled the study to have diverse participants, therefore, the broader experience of a career change and interpretation of it. To ensure I choose participants per bounded system of the research study, I included below screening questions as the primary criteria in the recruitment poster:

1. Are you a skilled immigrant (1-hold a minimum bachelor's degree from a foreign post-secondary institution, 2- have a minimum of one year of continuous work in a managerial, technical, or a professional job outside Canada)
2. Have you shifted your career toward a new industry of your choice recently?
3. Have you lived in Canada in the last 5 to 10 years?
4. Do you have work experience in your country of origin before you landed in Canada?
5. Have you worked in Alberta in your previous area of expertise before your career change?

Through the LinkedIn advertisement, I received 13 potential participants interested in the research. Most inquiries were from individuals who came across the recruitment poster shared by my professional network with their community groups. After double-checking their situation and background, only 10 fit the research screening criteria. I received five inquiries via the

Participate in Research website, and four of them match the requirements. Unfortunately, two of these participants changed their minds about participating in the research after realizing no financial incentive was involved.

3.4.1 Participant's Profile

Eventually, I recruited 12 participants out of all inquiries I received through the University of Calgary's Participate in Research platform and LinkedIn. I selected these participants based on screening questions. I asked them about their educational and professional background, years in Canada, previous careers, and a new career they established in Canada. Table 2 summarizes the detail of the participant's background.

Table 2 Participants' Professional Background

#	Pseudonym	Education	Years in Canada	Country of Origin	Occupation before Career Change	Occupation after Career Change
1	Alma	MSc	9	Iraq	Process Engineer	Software Engineer
2	Sam	MSc	8	Azerbaijan	Geophysics	Data Scientists
3	Ehsan	MSc	9	Iran	Process Control Engineer	Technical Analyst
4	Horia	MSc	8	Romania	Geophysicist	College Instructor
5	Maira	BSc	9	India	Structural Designer	Computer Science
6	Emilie	BSc	7	Iran	Network Engineer	Entrepreneur
7	Ditia	Master of Law	5	Seri Lanka	Lawyer	Social Worker
8	Kam	MSc	9	Pakistan	Air Quality Engineer	Civil Engineer
9	Moh	PhD	8	Iran	Assistant Professor	Data Scientist
10	Sabtu	MSc	7	Malaysia	Electrical Engineer	Machine Learning Engineer
11	Sibel	BSc	9	Turkey	Chemical Engineer	Economic and Modeling Supervisor
12	Viraj	MSc	7	India	Researcher	Economy Market Analyst/Fintech

According to the information they provided, four participants acquired a master's degree, and eight of them gained a bachelor's degree from a university in their country of origin. Out of 12 participants, eight had a background in engineering, three in physics, and one in law. After graduation, all participants worked for at least one year in their profession before coming to Canada. Most participants chose Alberta as their destination because its economy was booming,

and professional jobs, specifically in the oil and gas industry, were promising at that time. However, once they landed in Canada in the last 5 to 10 years, all participants still took a few months to establish their profession in Alberta. During their first years in Canada, eight participants completed a master's degree in their previous professional field to boost their careers and achieve higher employment outcomes. Before the notion of career change ignited, all participants worked in Alberta for a minimum of one year, mainly in the oil and gas sectors. Few participants worked in industries that were economically tied with the oil and gas sector.

All participants experienced a career change journey that lasted a few months to years to explore new possibilities and plan and execute how and where to learn new skills. In this period, they also had to develop a professional network, seek a new job in a new field and land a job as a beginning of a new career. After a successful career change, seven participants work in tech companies that are unique and emerging industries in Alberta. Other participants work in sectors including infrastructure, educational institutions, food, and non-profit. Two of these participants established their new careers outside Alberta and in provinces including Toronto and Ontario. All participants reported that their new career is sustainable and has room for future growth and development.

3.5 Data Collection

I collected the data of this study through two methods of inquiry. The first method was a semi-structured interview that was conducted virtually. The second method of inquiry was two focus group sessions conducted virtually with the same participants. The whole data collection period started in March 2021 and lasted till June 2021. In the following section, I elaborate more on the process of each method.

3.5.1 Interview

An interview is one of the most used methods of inquiry in a qualitative study. Interviews could be designed with open-ended questions that might be structured, semi-structured, or unstructured. The primary method of inquiry for this study was semi-structured interviews with 12 skilled immigrants from diverse ethnicity, who possess a minimum bachelor's degree, have been in Canada between 5 and 10 years, have at least one year of Canadian work experience besides their country of origin's work experience, and they have successfully shifted their career to a new industry or a new position.

The rationale of selecting an interview resonates with Simon (2009)'s indication that the interview enables the researcher to “get to the core issues in the case more quickly, to provide motivations, to ask follow-up questions and to facilitate individuals telling their stories” (p. 43). In addition, the conversation between the researcher and participants provides the opportunity to investigate further and the analysis of issues (Simon, 2009). In addition, Merriam (2009) recommends interviews when the researcher cannot observe behaviour, feeling, and the interpretation of people from their life-word or the event belongs to the past and is impossible to recreate.

All participants signed a formal consent letter to participate in this study and attend a virtual interview. For the purpose of confidentiality, I encouraged all participants to select a pseudonym. Therefore, all the names listed in table 1 are the pseudonym that participants chose themselves. Due to the ongoing Covid-19 pandemic and participants' safety, all interviews were held online through a Zoom link that I previously sent them. To meet ethical requirements for this research, the Zoom meeting guideline of the University of Calgary, including sending a password-protected Zoom meeting link, was followed. Upon beginning each interview, I

informed participants that the interview was recorded and asked them to give me verbal consent. I also briefly explained the aim of the research and went through the interview procedure to answer any questions participants may have.

Participants were asked semi-structured questions that I prepared before the meeting. These questions were initially shared with participants when scheduling the appointment to ensure they were familiar with them before a formal conversation. These questions were classified into four various categories based on the main research questions. Additionally, they were designed semi-structured to provide flexibility of discussion with participants to gather as much information as possible. As the researcher, I had in mind that the focus of conversations had to be around the aim of research questions despite the openness of interview questions.

Each interview lasted between 45 to 60 minutes, and I transcribed the audio-recorded meeting immediately after each session was completed. In this way, I was able to modify and improve the research question after reflecting on the previous interview and the outcome. Once I had the transcription of interviews ready, I shared it with each participant for the purpose of member checking and triangulation of data. In this way, I reflected on each interview questions and responses to be mindful of biases. Once all interviews were completed, I approached a few participants for final clarifications of their responses.

3.5.2 Focus Group

The second method of inquiry for this research was two focus groups. A focus group aims to gain a deep understanding and wide-ranging perspectives on the phenomenon and through a social context. Hennik et al. (2014) referred to the focus group as a qualitative research method that “involves a focus on specific issues, with a predetermined group of people,

participating in an interactive discussion” (p. 1). According to Cohen et al. (2018), the focus group method is a proper one to use once the goal is “gathering data on attitudes, values, perceptions, viewpoints, and opinions” (p. 532). Indeed, interaction in discussion between participants of this method was an excellent opportunity to gather information that is not emergent through other methods such as interviews.

While focus groups have some similarities with the one-on-one interview method, it is different from it in some ways. First, the role of the researcher in one-on-one interviews is an investigator who attempts to interpret the perspective of a participant during the interview direction to gain an in-depth understanding of the participants’ perspectives. At the same time, the researcher’s role changes to a facilitator who facilitates a discussion between all participants instead of participants and the researcher (Nyumba et al., 2018). Additionally, the focus group method aims to gather collective data rather than merely the perspective of individuals (Cohen et al., 2018). Further, the focus group participants’ interaction becomes more important than an individual’s perspective on the topic in terms of data collection. Once the researcher facilitates discussion between participants, there is an excellent opportunity for a new set of data to emerge from the interaction that could have been hidden in individual interviews. Focus groups provide an opportunity for participants to become exposed to the view of others and reflect on it. Through reflection and interaction with others, participants could reconsider a new understanding of their experience and revise their interpretation of it, resulting in more emerging detail (Hennik et al., 2014).

For the purpose of this study, I sent a separate invitation letter after I scheduled one-on-one interviews and requested participants to pick one of the two pre-scheduled focus groups. Eventually, I organized two focus groups, one with 6 participants and the other with 5

participants included. Unfortunately, one participant was not able to attend the focus group due to a family emergency. Similar to interview sessions, these focus groups were organized via a password-protected Zoom link that I sent to the participant's email address separately.

Before each meeting, I asked participants to sign a separate consent letter for the purpose of a focus group. I also informed participants that although I requested all participants to maintain the confidentiality of other members of the focus groups, I could not guarantee complete confidentiality. To minimize the confidentiality risk, I asked each participant to change the name that appeared on the zoom link to the pseudonym name that they had previously chosen for themselves.

Before the meeting formally started, I reminded participants the meeting was recorded. I initiated both focus group sessions with a question guide that I had previously prepared. After asking a couple of questions as a guiding one from each group, I invited participants to share their personal opinions and relate their experience with the topic of questions. Participants were quite willing to interact with other members of the session, reflect on conversations and share their thoughts with the group. Eventually, both focus group sessions lasted between 70 to 80 minutes. Later, I transcribed both recorded sessions and used the transcription as the source of data analysis.

3.6 Data Analysis and Presentation

Data analysis of qualitative study could start from the beginning of data collection. Merriam and Tisdell (2016) stated that “without ongoing analysis, the data can be unfocused, repetitious, and overwhelming in sheer volume of material that needs to be processed” (p. 197). Therefore, I collected and analyzed data simultaneously based on the direction of qualitative

study theorists (Creswell & Creswell, 2018; Merriam & Tisdell, 2016; Simons, 2009). For the purpose of this study, I decided to follow 5-steps data analysis recommended by Creswell and Creswell (2018) that includes: 1) organizing data that mainly includes transcribing of data collected from interviews and focus groups, 2) overall looking at gathering data that involves reflection on data, 3) coding of data that involves interpreting, categorizing, and labeling data, 4) theme and description generation that represents the significant findings of the research, 5) representation of theme and description.

While the steps may indicate a linear data analysis procedure, I did not follow the sequence of these steps due to the nature of data analysis in a qualitative study. I conducted various analysis circles starting with the beginning of the data collection phase that helped me reflect on interview questions and focus groups and provided me with opportunities to change the direction of interviews once needed. For this study, I decided to manually transcribe and code the recording of interviews and focus group sessions instead of using a software. This way provided me with an opportunity to delve into data and have a better sense of analyzing it in the process of transcribing.

3.7 Trustworthiness: Credibility, Dependability, and Transferability

To ensure the trustworthiness of data in a qualitative study, a researcher requires implementing a strategy through collection, analysis, interpretation, and presentation of data to address the trustworthiness of qualitative research (Merriam & Tisdell, 2016). By underlying philosophical assumptions of qualitative study, Lincoln and Guba (1985) associated four issues of qualitative trustworthiness: credibility, transferability, dependability, and confirmability.

These concepts replaced four terms, internal and external validity, reliability, and objectivity,

proposed by the traditional worldview of positivists (Denzin & Lincoln, 2011; Merriam & Tisdell, 2016).

Credibility or internal validity refers to measurements that ensure the finding of the research is following the truth. However, from the perspective of qualitative research, “reality is holistic, multidimensional, and ever-changing; it is not a single, fixed, objective phenomenon waiting to be discovered, observed, and measured” (Merriam & Tisdell, 2016, p. 242). Hence, as the main instrument of data collection, the researcher is the best person in a qualitative study to interpret the experience of individuals and ensure the increase of research credibility by implementing a proper strategy to interpret the phenomenon (Merriam, 2009). Scholars in qualitative research methodology have suggested different methods, including triangulation, member check, prolonged engagement, peer briefing, thick description, and audit (Creswell & Creswell, 2018; Merriam & Tisdell, 2016; Patton, 2015).

In traditional approaches to dependability or reliability of research, research is reliable once the study results can be replicated. However, in a qualitative study, the replication of data is not a proper reference to examine the reliability of research (Lincoln & Guba, 1985; Merriam 2002). As mentioned before, qualitative research’s reality is not a single or fixed context waiting to be uncovered. Indeed, replication of a qualitative study may not result in the same finding because the experience of individuals and meaning-making out of it might not be the same. Therefore, in qualitative research, reliability concerns the consistency of findings with data available throughout the experience rather than a replication of results (Merriam & Tisdell, 2016). Triangulation of data, peer examination, and investigator’s bias are proper strategies to profoundly examine qualitative research’s reliability.

Transferability, external validity, or generalization refers to applying a study to a new setting, people, or samples (Creswell & Creswell, 2018). From the perspective of positivists, a study is generalizable when the research finding can be expanded from the research sample to a population (Merriam, 2002). However, concerning the philosophical underpinning of the qualitative approach, generalizability from this standpoint is not possible in qualitative research because the sample of qualitative research is chosen mainly. According to Merriam and Tisdell (2016), transferability of qualitative research occurs through “readers or users of the study” (p. 256). It is up to study users to apply the study’s findings to another particular study or people of the study. Although the reader decides to use findings toward another situation, the researcher is still responsible for providing a rich and detailed study context that enables readers to make an informed decision (Merriam, 2002). Thus, providing a thick description is a recommended strategy for the transferability of qualitative research.

To address the credibility of this research, I applied triangulation of data, thick description, member check, and ongoing clarification of the researcher’s bias. To reduce concern about the reliability of the research, I applied a triangulation strategy using multiple data collection methods, including interviews and focus groups. Additionally, I constantly clarified my assumptions and biases with reflexivity to acquire a credible understanding of people’s experiences. For the purpose of transferability of the research, I provided a detailed explanation of the context and phenomenon of this case study and the situation of participants of this research.

3.8 Ethical Considerations

Considering potential ethical issues throughout the study is part of the trustworthiness of qualitative research (Merriam, 2009). The qualitative researcher is obligated to “respect the rights, needs, values, and desires of the informant(s)” (Creswell & Creswell, 2018, p. 207). For this current study, I ensured that research procedures, including data collection and data analysis, and any settings involved with participants and information are in accordance with ethical requirements, and participants were treated ethically. I explain the measurement I practiced throughout the research to comply with the Tri-Council Policy of ethical conduct accordingly.

Before the beginning of data collection, this research acquired ethics approval from the University of Calgary Conjoint Faculties Research Ethics Board after all required documents and procedures were reviewed. Subsequently, I started recruiting participants through professional platforms. Recruitment letters with detailed descriptions about the purpose of the research were sent to potential participants to get an informed decision to join the study. Further, I informed selected participants about the procedure of focus groups along with interviews through formal communication. Additionally, I provided each participant with two separate consent letters to sign for both one-on-one interviews and focus groups. These letters explained their confidentiality and anonymity rights and the right to withdraw from the research once they intended to. Moreover, I provided participants with a summary of questions to better understand the types of questions for interviews and focus groups. It is worth mentioning that after the interviews, I shared the transcript of the interview with them to double-check their opinions and perspective to decrease threats against the trustworthiness of the research.

All information and data were saved on two secured devices; my personal computer is password-protected, and an external hard drive is kept in a locked drawer. Additionally, each

transcript file or other information was encrypted with a password. Moreover, any copies of documents were held in the locked drawer that I only had access to.

3.9 Limitation of the Study

Due to health-related restrictions concerning Covid 19 imposed by Canada's Federal and provincial government, all interview and focus group sessions had to be organized virtually. In terms of initiating a proper rapport with participants, this situation was concerning initially. However, once the interview sessions started, I figured out that all participants' mindset was ready to attend these virtual meetings completely mindful. Additionally, since I was mindful of the limitation of virtual meetings, I mindfully initiated informal conversations with each participant to ensure no hesitation caused them to hold back information about their career change. To ensure that I do not miss participants' physical or mental frustration through each session. I proactively asked about their attendance if they needed to take a break, or any question may bother them.

Moreover, because of the research design of this study, I aimed to recruit participants who landed less than ten years ago in Canada. However, this deliberate bounding had a downside toward more data regarding the long-term impact of their acquired learning and perspective changes on the new career. To elaborate more, participants were mainly at the beginning of a new career after a transition they conducted. As a result, this study could not provide more input on how a transformed perspective of participants has also positively impacted their attitude in the long-term of their new career and how it could help them thrive in the development of the new career. Since I was aware of this limitation and delimitation of this study regarding time constraints on a career trajectory, I ensured to ask specific questions about participants

perspectives once they reflected on their new career, even if they were into that for a few months.

3. 10 Summary

In this chapter, I explained the rationale of applying a qualitative case study to explore the learning experience of skilled immigrants who had a successful career change to a new industry of their choice by developing their metacognitive learning skills and attitudes upon abrupt changes that caused them uncertainty about their future career. I also explained the research design of this study and the procedure I used to gather data throughout the interview and focus group with research participants according to qualitative case study research methodology. Additionally, I explained strategies that are used to ensure the issues of trustworthiness are minimized, and ethical considerations are addressed.

Chapter Four: Findings

The objective of this qualitative case study was to explore the experience of self-directed learning of skilled immigrants who conducted a career change due to uncertainty in their previous careers. In response to research questions, I present four major themes that emerged through the data of interviews and focus group sessions. The presentation of these themes is based on a combination of career changes' trajectory and research questions. The first theme is about external and internal factors that motivated participants to initiate a career change. In this section, I explore the occurrence of trigger events that all participants experienced as an initiator of their career change journey. These trigger events were mainly in the form of layoff, uncertainty in the future of their job, and hassle work environment in the Albertan oil and gas industry. Further, I illustrate factors that emerged as intrinsic and extrinsic motivation to further explore new career possibilities. Moreover, I investigate the lack of three major career needs that boosted participants' motivation for a career change.

The second theme explores learning strategies used by immigrants to maximize their learning skills and facilitate their career change amid other responsibilities or constraints. This theme indicates that these immigrants successfully managed and monitored their learning process despite their limitations. Additionally, this theme displays participants' critical reflection and discourses that occurred throughout the journey.

The third theme illustrates how self-directed learning of participants positively contributes to the acceleration and success of a career change. This section explains how self-directed learning strategies impact participants' characteristics and perspective transformation toward career development. Indeed, essential reflections and critical discourses with others led to a significant transformation of their perspectives, values, and attitudes toward their careers and

surroundings. Further, I explicitly explain the perspective change of immigrants toward the concept of career development. This journey initiatives by mostly unexpected events, help them re-evaluate their perspective on how to control their career. Eventually, this theme illustrates the appearance of major traits that participants developed through the journey.

The fourth theme discovers the primary barriers of immigrants toward a career change in Canada. Participants compared their situation with a Canadian-born and illustrated challenges they exclusively had due to being an immigrant. These themes are supported by data from interviews and focus groups and occasionally presented in quotes from participants.

4.1 External and Internal Factors as a Change Initiator

4.1.1 Trigger Events

Participants reflected on their experience that led them to a pivotal change in the middle of their careers. All participants came up against some events that pressured them to take critical actions and explore new opportunities. During two focus group sessions, all participants indicated that the instability of the oil and gas industry and the Alberta recession that happened in 2014 and carrier over the years after ignited the idea of significant changes in their careers.

Among them, the career change of six participants initiated with layoffs from their permanent job in the oil and gas sector. In these cases, participants either knew that they would be laid off soon or got laid off suddenly. Most of these participants tried hard to land another job in the same industry with the same position for months, but they could not find any job in Alberta's oil and gas market at that time. Therefore, they decided to explore other career possibilities outside the oil and gas industry.

The process of losing jobs of these participants mostly happened gradually in a few months, which provided opportunities to reflect on their career and think about other possibilities that they never seriously thought about before. Kam indicated that his gradual layoff from the company he used to work with before was the beginning of thinking about the career change. Indeed, his specialties were in a very niche area of work, and only five to six companies had projects in the field of his specialties. Before the recession, his specialties were considered one of the high-demand jobs, and he never thought about losing job security for his position. Once his company lost some significant projects, the mass layoffs started soon after. Although he was not the first employee who got laid off, his working hours were reduced significantly. While working part-time, Kam tried to apply for other positions with a couple of companies he knew in Calgary, but they were in the same situation of laying off their employees. His specialty was not in demand anymore, and it was a massive turn for him. As he reflected on his perspective at that time, he mentioned that:

I thought it was going to be like that forever. Now that I think of that, I was very naive to think it was my first professional job ever. I cannot expect much more of myself if I go back in time...The opportunity was good enough for me to close my eyes to everything else I was doing very well at that time. I did not see that this could have changed in a blink of an eye.

Indeed, before the recession, Kam never had a plan to pivot his career, and he assumed that he could stay in this career forever.

Similarly, Ehsan encountered the same situation in 8 to 10 months of his previous career. He had to work in a smaller and far away facility throughout these months since the company closed many facilities across Alberta and sent most of his remaining employees to work in the

last facility they kept open. It resulted in extra four hours of commute every day instead of doing additional tasks since the company lost many people while keeping the same projects with fewer people. Ehsan articulated these changes along with extra commute hours as “bonus time to think about next steps.”

Likewise, Alma got laid off in a few months after her company lost some previously awarded projects, which could have lasted about five years. Although she had a few months of thinking and acting on her next job opportunity before getting laid off, she could not find any option in her field with other companies. This time was a turning point when she realized that she had to look outside the box. Another participant, Sabtu, had even more time before knowing that he would be laid off soon to find a new opportunity. Still, the situation of Alberta’s economy made it impossible for him to find another job or foresee any future within it. In the case of Maira, despite her dedication and hard work to stay employed, she got laid off twice in two years from two companies, and she could not find any other job after that.

For the rest of the participants, although they were not laid off from their last job in the oil and gas sector, the recession or uncertainty in the Alberta economy had an indirect impact which became the initial driving force of career change for them. These participants were mainly at the beginning of establishing a new career in Canada. At the same time, the recession impacted their work situation in which they could not see the possibility of career advancement in the future. Therefore, the future of their career became more uncertain and unstable that, called for critical action to make changes. For instance, Viraj and Sam both were newly graduated who started their career as researchers of their field of study with a long-term goal of entering the corporate sector in Alberta soon. However, with the impact of the Alberta recession on all dominant sectors, their professional future became more uncertain for them. In the case of

these participants, since they had less work experience than other candidates in their fields, they felt they had very few chances of getting to the corporate sector soon. As Sam pointed out:

When I graduated and started working as a researcher, there was no position in the market. Many highly experienced geophysicists were looking for jobs at the same time. They were all looking for a job while there mainly were no positions available; Therefore, the competition was so intense with a meager chance of getting hired for newly graduated students competing with senior geophysicists.... So, I had to be flexible and use a magic strategy rather than sticking to one option.

Similar to Sam, Viraj could not foresee a bright future in his previous career in the oil and gas sector:

First, I realized that I would not be able to have a future as a corrosion engineer since the market went down. Second, corrosion engineering did not have the possibility of being developed with high-tech methods anymore, and it could become an old-fashioned field in the long term. So, I realized that I would not have any progress to make in the future.

Likewise, Sibel experienced a similar impact of instability in the Alberta economy.

Although the future of her job with her oil and gas employer was promising, the career development of process engineering became limited at that time. She knew that because of the dramatic increase in the oil and gas price, there would be a very slight chance of doing a job that involves more intonation and creation in terms of her engineering job. She realized that in the next ten years, she might never get an opportunity to become responsible for tasks that take new knowledge and new skills of her:

At that time, I was no longer challenged by my tasks, and I felt like the learning curve was plateaued. And there was not much for me anymore in engineering ... Personally, it

was not my interest anymore to go and sit behind the desk and just do designing pipes and valves without having a hope of doing something more creative in the future. At that stage, I felt that I had to challenge myself.

In the case of Moh's transition, the initiation of changes was triggered by the consequence of the Alberta recession on other sectors. Moh was a contract instructor at the University of Alberta with a promising future of becoming a tenured professor at this university in five years. However, since the 2015 recession of Alberta resulted in budget cuts in the education sector, the situation turned upside down. The university informed him that his five years contract will no longer turn into a tenure position and will be terminated at the end of his contract; "our department planned to hire young faculty. But they shot it down after the Alberta Education budget cut. My manager told me the university did not have any prospect of hiring new faculty, and I should think about other universities."

In the story of Moh, he had been planning an academic career since he was in his bachelor's degree. All the steps he took during his professional career, doing research in specific fields publishing many articles, were all planned by him to achieve an ultimate academic position for the rest of his professional life. Consequently, the uncertain future of the Alberta economy drove him to the conclusion that he had to pivot in his career, although he never thought it might happen.

Ditia was another participant whose career was affected by Alberta's recession. In her case, she was forced to make career compromises since a budget cut happened in scholarship programs at law, and she could not get a necessary second degree in law to establish a career in Canada. Another study participant also felt the impact of economic instability that eventually she had to quit her job. For Horia, the situation at her workplace became very hostile and challenging

to work anymore. Indeed, her company laid off many employees, and she was one of the last workers to stay there. Since having a job was quite competitive, her employer took advantage of this situation and mandated more tasks and hours without proper payment. After taking a few months in a hostile environment, she realized that this work was against her principles and decided to quit and find a path she always wanted to walk in.

In addition, several participants expressed that they found these pivotal events a unique situation and drove them to explore new options that they never thought they would do. According to their explanation, they never had a chance to think about these new possibilities and push themselves out of their comfort zone to look after new potentials. As an example, when Ehsan reflected on his previous career, he mentioned that he was never quite satisfied with choosing a chemical engineer in the first place. However, he always felt that it was too late for him to make a bold change until the pivotal event happened in his life:

The fact that I had to make changes because of the earlier mistakes was another reason to think of career change on top of the oil and gas situation. I made a mistake choosing chemical engineering over computer engineering in my bachelor's degree... When you do your day-to-day, you just keep moving. When you get a break in life, you stop and look around. If everything were perfect and like the golden days of oil and gas, I probably would have stayed there, but that would have been wrong.

Some participants indicated that these situations were a pivotal opportunity to explore new options they always wanted to do; however, they never had the privilege of exploring career alternatives because of having an established career or adulthood situation. Indeed, these unexpected experiences pushed them out of their comfort zone to seek new opportunities or give them a second chance to move forward with a passion that they always had for other career

paths. In the case of Ehsan, he realized that his passion lay in computer science while he was already in the last year of a bachelor's degree in process engineering. Despite understanding this about himself, he thought it was too late to move toward computer engineering. Similarly, Emilie never had a chance to think outside the career she was already in. Despite the hostile environment for women in software engineering, she kept trying to stay in that career and never realized that she could have gone to a new career. Although she always had a dream of owning a business, she never thought that it would be possible to pursue it in reality:

I remember taking a course back home for entrepreneurship since I always wanted to be one, and it was such a weak course, and I had no idea what I was doing. I had that at the back of my mind as a wish. I always thought that I needed a lot of experience to start my own business, though... Even in Canada, I had that in the back of my mind that I was envying people having a start-up that is smart having a tech-related business.

Like Ehsan, Moh was interested in computer engineering but did not get admitted to computer engineering as a bachelor. Instead, he tried hard to incorporate mathematical computing into his material engineering research as much as possible to address his passion for computer science. Once the termination of his contract happened, he found the opportunity to pivot. Alma was another participant that found this situation a good time to get back to her passion. She always had interests in biochemical engineering, but she could never enter that field. However, once she was exploring options, she came across a program that was aligned with her passion for biochemical engineering. As Alma reflected on the experience, she mentioned that she would have stayed on her previous career and never followed her dream for bioengineering if it was not for the time she got to assess her career choices.

4.1.2 Extrinsic and Intrinsic Motivation

Participants' motivation to change their careers and pursue different types of self-learning activities was the second theme that emerged through the data of this study. Indeed, participants' reactions to unexpected events in their careers were driven by various reasons. The findings of motivations indicate extrinsic motivation and intrinsic motivation. This section presents themes related to the initial motivation to explore and start a possible career change journey.

Financial constraints were the main reasons that forced most participants to seek another career at the time of economic instability. Particularly, participants laid off from a job in the oil and gas sector had difficulty finding another job in the industry. During focus group sessions, participants mentioned that although they had a 12-month Employment Insurance (EI) from the government financial support, they were still highly concerned with the future or their financial situation. At that time, forecasting Alberta's future economy was not bright. Most participants were worried that they could have stayed unemployed for years without taking pivotal action. Many of them recalled that colleagues who were laid off months before they were laid off could not find a similar job even for a couple of years.

Not only the financial perspective of the future was in question for immigrants, but the previous cost of immigration and settling in a new country for the first few years has also dramatically depleted their savings. Additionally, 5 participants discussed through the focus group that they had not been in Canada long enough to build on the savings they had already lost. Through the focus group example, when Kam reflected on her reasons to make a transition, he indicated that "I was very short on money at that time, and I wanted to have a better life in terms of financial status." In the case of Emilie, she was on EI for a limited time while she had to pay back outstanding loans she granted from the government for certificates that she acquired for

her previous career. Therefore, she had to be creative and effective in finding new ways since she had limited time to figure out a new career to explore. Additionally, the ways she could explore and learn new knowledge and skills were limited by the eligibility criteria of EI; thus, she had to be creative and effective in her pivotal changes. Indeed, the pressure of improving the financial status was one of the main reasons these individual immigrants made new changes in their careers.

Desires to learn more about a specific field were another interesting theme that emerged through data. Seven participants mentioned that their primary incentive to begin a career change journey was associated with interests in the new field of work. These participants either were aware of their interest or became aware of it after beginning exploration of new possibilities. Because of their incentive to learn knowledge and skills in a specific field, they could successfully initiate their career change and enter activities necessary for a career change.

Three of the participants already had a deep interest in another field, but they never had a chance to pursue it until the trigger event happened in their professional life. The story of Ehsan is a great example of this. As I referred to his story before, Ehsan was not satisfied with the process engineering career he chose in his 20s. However, he decided to carry on with his choice and tried to develop that career. Once the circumstances of his career changed due to the Alberta economy, he moved forward toward a more desirable field. Similar to Ehsan, Viraj turned the struggling situation of his last career into an opportunity to seek what he always wanted to do. He was fascinated with economic studies and complex analysis involved with a career in that field. Even in his country of origin, he tried to switch his career by getting a master's in economics or MBA, but he could not get admission for graduate study in this field. Until the

downturn of the Alberta economy happened, he took advantage of it to make the shift toward his passion.

Moh was highly motivated to learn more about Artificial Intelligence and machine learning, and his interest was the main reason he successfully took proper steps. All he could do in his last career to fulfill his passion was incorporate these into his research topics. However, as soon as he realized that he had to think about a career change, Moh decided to make that transition toward something that was his true desire field:

I believe your success in change relies on how motivated you are to make that change in your life and how motivated you are in the topic... My brother is a good example. He is a smart student with a master's degree. But he is not interested in change. He even completed a couple of courses that I suggested in data science, but eventually, he was not interested in the field I was passionate about. It was different for me, and I wanted a career in computer science deeply.

His reflection implies that while this field was a strong incentive for him to change a career, it could not guarantee motivation for others. His passion was the internal reward that helped him choose this field and keep going.

Three other participants developed an interest in a particular field of study while initially assessing a possibility of a career change. Once they learned about a new one and developed an interest in it, they were motivated to take proper actions to make the transition possible. As an example, Sam took the advice of his professional network to explore the field of data science, and that was the time that he became motivated to learn knowledge and develop skills in that area; "when I looked at the material and area of study, I found it interesting, and it motivated me to keep going; those motivations made me go further and learn more."

For Alma, she found her passion while taking some introductory courses to various fields of engineering. In one of the sessions, she learned about the idea of applying data science in health, and that was the point that she found her motivation to step into that career. Similarly, Maira's motivation toward a career in computer science emerged through the period that she was exploring various career possibilities and learned more about that field; "the main reason is that when I went to computer science, it was all about math and physics, and I liked problem-solving, and there was a lot of problem-solving in computer science as well."

Last but not least of these participants were Ditia, who found her true passion when she came across a person who was a social worker. Before that, she never knew about this career, and the inspiration of that person eventually became her passion for pursuing a new career in Canada:

It was my passion to help people. And when I realized that there is a social work career that can empower people, I wanted to do that. As an immigrant, I went through many tough phases while not having proper support to guide me. Although I was able to make it through those phases, many immigrants are still struggling. I told myself that this is the field I always wanted to be in because I am, by nature, drawn to such a profession.

Although these participants were already under financial, social, and workplace pressures, their strong motivation for a career in their desired field expedited their actions toward a significant career change.

4.1.3 The Need for Autonomy, Relatedness, and Competence

Throughout the data of focus groups and interviews, a need for control over a career, choice in career, and a desire to direct participants' own lives emerged in different parts of their

discussion and narratives. While participants reflected on the last years of their previous career, the lack of control for their career development or shortfall of choices in the future of their career pushed them toward a new possibility that provides them with more power and opportunities in the future.

Sabtu reflected on the last year of his previous career, indicating that: “I worked five years and this uncertainty in the economy gave me enough motivation to find another career path that would make me industry independent. While I was considering the career change, I decided something to be industry independent.” For him, the condition of oil and gas and its impact on the business caused him a lack of control over his future career. Similarly, Maira had the same issue of control over her career: “After the first layoff, I joined another company, and I got laid off again. After that, I said to myself that I should choose something that I would not depend on this kind of uncertainty and ups and downs”. Comparably, dramatic changes in the workplace environment pushed Emilie toward entrepreneurship to take control of his career:

My last company used to care about staff and their career. But then changes started to happen. In 2014, everything changed, and the good culture was gone...It was not easy to work for a company with a poisoned culture at that time. I was making that career for money. When I realized that there was no job security in that career, I was just putting my life in danger. I knew that definitely; I was not the person to take the path of working for a company anymore. I was willing to take all the effort to build my own business, and then I realized that when you decide to do that, you will find the means to do that and the way to do that.

Indeed, the hostile environment resulting from economic pressure on all levels of her company represented the absence of autonomy over her career. Her feeling of working for a

company without any passion became an incentive to take control of her career and follow her passion for entrepreneurship.

Participants like San, Sibel, and Viraj lacked future opportunities in the landscape of their careers. For them, the uncertain economy, fewer future opportunities, and career development, which meant losing perspective for a successful long-term career. While working at university, Sam was actively looking for an opportunity in the corporate sector with no success in landing a job:

I could not stay like that hoping something would come up; you do not know when it may happen or what may happen next. I knew it could be something that would happen with a transition rather than sitting on the couch and waiting for a geophysics job to open. So, I had to be flexible and use a magic strategy to do new stuff rather than sticking to one option I had at that time.

The economic condition took away many future opportunities for him, and he could not have a chance to develop his knowledge and skills in the private sector as he planned for his career. Therefore, he had to take the initiative and shift toward a career that gives him more autonomy over his choices.

Moreover, one of the negative experiences that emerged as a motivation to seek a new career was the lack of a sense of belonging. Some participants indicated that due to changes in their working environments, they could not connect with their role or imagine themselves as professionals in the future of that industry anymore. As an example, Horia's experience with her last manager made her realize that she may never be able to thrive in the oil and gas industry because of its specific aspect of the industry:

I tried to look up to my last manager as a role model woman in the oil and gas industry because that was the highest I could get. I looked at her, and I realized that I did not want to be like her; because being a manager in this industry takes a certain discipline that I don't have them or even want to develop those skills either.

A hostile environment augmented by Alberta economic conditions also caused a feeling of exclusion for Emilie. Working as an immigrant woman in a male-dominant environment led her to believe that she did not belong to that industry. Likewise, Sibel also experienced the feeling of exclusion that pushed her to think of a new career:

My company is one of the worst oil and gas companies in terms of diversity. The company is not open to inclusion and does not promote diversity in any terms at all. All the senior-level management are white men. I can not think of any VP or senior VP that is from a diverse background. When I realized that, I knew that I would not have a future goal, and it looked like a dead-end for me. I know that I could not grow my career very far.

These parts of their narrative indicate that they wanted to seek something different. These situations became an incentive for them to look for a career that would provide them with a better rapport with the environment and people within it.

Besides the lack of belonging that pushed participants away from their careers, one participant had a positive experience beginning a new career. Kam made a career change motivated mainly by financial incentives; however, after a few months in a new position, his perspective changed dramatically:

My initial motivation to start a new job in a new industry was only financial. I was not invested in only having a good salary, but I did it with the new job to have a source of

income at that time. After a while, I realized that I had space to grow myself in that company. So, I started to work hard and then year over year because I chose a good company and was comfortable with my colleagues. I began to learn from them. And as you broaden your knowledge, you get more confident you are getting better at what you are doing, which motivates you to go to the next level.

While he switched to a new career because of the external pressure of improving his financial situation, his interests in that career began to grow gradually. As a result, his transition became a meaningful learning process and relating himself to what he does.

Further, most participants who could not expect personal and professional growth in the short-term or long-term of their career sought other ways to provide themselves learning opportunities to continue their development. In the new environment workplace caused by the pressure of economic downturn, opportunities to grow a career and learn new skills and knowledge on that career was less possible. In the absence of opportunities to learn and stay effective in a changing environment, participants were determined to address their needs for building a new skill set. Such skillsets could empower them to overcome the uncertainty that was widely happening in their professional environment. Viraj's condition in oil and gas is a good example. He used to work in a part of the oil and gas sector, which would not have enough future capacity for innovation and development; "professional development was important for me, and I did not want to be in a career that there is no room in the future to develop myself there." Viraj anticipated that his career would become outdated soon, and his career would not have any room left for new skills and knowledge to explore and develop.

Comparably, Horia was challenged with the lack of creativity and innovation in his field of work which could result in limited future professional development for her; "there were so

many processes that can be designed differently in terms of efficiency, and companies were not doing that because they thought that old processes were working. But the reality was that their technology was gradually becoming obsolete.” As a consequence of oil and gas company resistance to incorporate critical changes, employees like Horia had to face the challenge of finding ways to seek new skills as their current job did not require any knowledge update anymore.

Sibel was another participant who felt the absence of learning and development in his career: “I was not challenged at my job anymore, and I felt like the learning curve was plateaued. And there were not many skills left for me in that engineering position to learn.” Likewise, Sabtu felt he was trapped in his career without any future of development:

In my previous work, I was working with a limited amount of knowledge of what we had learned, we were stuck to the fact that it never changed, and we always used the same formula and the same approach and everything. No new tech or algorithm, or method was created at that time. I thought if I went ahead this way in the next ten years, I would not use my brain at all, and my brain would die over time. I thought I take a field that is live and dynamic.

Indeed, opportunities in Alberta’s oil and gas industry gradually declined when most of these participants initiated their career change. Consequently, the need for growth and improvement in the professional life of participants was a significant driving force to amend and make changes to provide themselves with chances of thriving career options.

The themes that I presented here were mainly related to the initial driving forces that encourage participants to initiate their career change. Additionally, participants actively motivated themselves to consistently take action and continue with their tasks of career changes

through the process. In the next section, I will explain more about these motivation tasks in the self-management section.

4.2 Self-directed Learning Strategies

Throughout the career change journey, participants strategized the process of the required learning involved with their transition. They managed to efficiently develop self-directed learning skills that supported them to acquire the knowledge and skills needed for their new careers. They proactively monitored and managed their learnings and modified their way of learning while required. Additionally, these participants critically reflected on their perspectives, values, attitudes, and actions by exposing themselves to new opportunities or critical conversations with others. In this section, I elucidate how these participants actively took control of their learning process and successfully managed to pivot their careers toward a new and thriving one.

4.2.1 Self-management and Self-monitoring

Participants of this study illustrated that they continuously self-managed and self-monitored the process and outcome of gaining new skills and knowledge. They actively practiced controlling what, how, and where they were required to learn new topics to enter a new field. Additionally, they mindfully monitored their learning process and assessed their learning outcomes to ensure they were on the right track toward a successful career change. Indeed, participants facilitated their career change by applying self-management and self-monitoring strategies as two forms of the self-directed learning process.

After participants figured out what field of study they were willing to discover and gain skills, the next step was exploring resources and ways of gaining knowledge and skills.

Time management and goal setting were two of the main self-monitoring tools that participants actively incorporated throughout learning new skills and knowledge. Along with other adulthood responsibilities, these participants ensure that they execute an effective learning plan through their time of transition. The story of Sam was a great example of the efforts that participants made to balance their life responsibilities with their learning needs:

Back in the time, I started to work in a restaurant in Calgary. The good thing was the shift started in the afternoon till night, so I had enough time to study during the day. So, I did not have to study the entire day, which made me so inefficient to do that. I started having a learning process in the morning, and after 2 pm I could go to work. I did my studies somewhere outside, like coffee shops to study, so I enjoyed those moments even though it was hard to work and study during the day.

At that time, Sam worked in a blue-collar job to cover expenses while learning new skills to become a data scientist. Working with an unusual schedule, he mindfully monitored the time he was more effective and planned his learning time to get the best result out of the limited time he had. Similarly, Sibel and Kam did the same. They had to complete their full-time job tasks while learning new concepts.

Comparably, Sabtu dealt with challenges of managing his adulthood responsibilities along with time constraints he had for learning to learn new contexts wisely:

Learning is not just taking the classes and passing the course. You have limited time. All the projects of the online courses I take are three months, and I have two weeks to learn new concepts, so I need to learn how to learn efficiently to manage my time while I have

other responsibilities in life. After two weeks, you must know what you learn and incorporate it ASAP.

Sabtu took courses from different online platforms to customize a learning plan and succeed in all of them, and he productively managed his time to meet the deadline of the courses and benefit from the content.

Goal setting and time management are intertwined tasks that benefit an effective learning process. Alma incorporated the technique of goal setting to ensure she used the most of her time and resources to succeed: "...you want to work in your path with focus. You need to be a strategic thinker with goals in mind to move forward; otherwise, you will be exhausted and make no progress." Likewise, Kam worked through his new learning concepts by actively setting goals that he could achieve: "I defined goals at the end of each year such getting a certificate. I got that; then, I applied that in my work while setting a new goal. That helped me to get my confidence and work through learnings." Indeed, by actively performing these two self-monitoring tasks, participants could successfully overcome the exhaustion and hardship of learning new skills while being uncertain of not knowing what might happen in the future.

In addition to self-monitoring, participants contemplated the self-management strategies they used to take responsibility for their learning and define what, where, and how they learned new concepts. Indeed, figuring out these parts was one of the vital decisions they made throughout the transition process. When participants explored their options, they pondered what kind of skills and knowledge they needed to learn. Throughout multiple meetings with experts in the field of data science, Sam evaluated required skills that he partially had and one that had to be developed yet:

I figured out three parts to learn: data science theory, programming, and a great understanding of the market. Because of my background, I was good at programming, and I understood the theories. But the market and the industry were the big gaps for me...first, I started improving my programming and learning more theories. It was hard to understand a few things, but I practiced and got better. Still, the market was the issue for me. So, I worked on two other areas to cover that missing part.”

In the case of Sam, he strategically distinguished between skills he could develop in a short period and the ones that could take more time. Later, based on his assessment, he focused on learning skills that could make him a strong candidate for a data scientist’s position. Viraj and Mira also figured out the gaps they had in the new career’s required skills and planned their learning based on the skills that distinguished required development.

Additionally, participants had to figure out platforms or institutes that provide the most effective resources that are subjective to their needs. Sabtu reflected on exploring the best platform and challenges involved with this exploration:

Initially, I had no idea what area I was stepping in. When I decided about data science, I started with Udemy courses on python. In the beginning, I couldn’t understand the concept during the course. I had to go online to search how to do things, what this means, and those kinds of things. Then I realized that maybe I could not learn online; that was when I decided to get a degree with the UOC in data science which was in-class learning.

Another example of a learning challenge was choosing between many available resources for Alma:

With software engineering, there are a lot of online platforms that you can go through. You can have multiple options for one little concept to learn that; you can take an online

course from MIT, take a YouTube video in two minutes, depending on what you want from that concept, whether it is a deep dive or skim through. The challenge is managing your time and choosing the best option for yourself.

Most participants successfully overcame the challenge of choosing the best learning platforms by consulting with experts and gathering information from websites. After gathering information from websites and insights of experts in their fields of study, participants successfully overcame the challenge of choosing the best learning platform that matched their needs and conditions.

Moreover, these participants were careful of the specific way that they learned the most. Either they were aware of their learning style, or they gained knowledge of the most effective learning way for them. Since it was a new field of learning for them, participants took the initiative to manage their learning process and modify them once needed. Horia's best way of learning involved taking notes while learning new concepts. However, she realized that this was not the best way of learning, specifically for learning new skills in the new field. Therefore, she tactically made some adjustments in her learning habits and changed her way of learning to optimize the process of learning and its outcome. Viraj realized that his situation of learning was different from other students; therefore, he ensured that he customizes learning tasks based on his condition:

In the first three semesters, I could barely understand the courses' content. So, I talked with professors about more resources to read. I also attended conferences and events in the department to learn more about the economic stuff and network with people. Even I attended undergrad courses to get a background in economics.

Similar to Viraj, Ditia altered her ways of learning to adapt to her new learning needs:

Although my English is good, the language for writing in this career was at a different level. So, I had to figure out and learn more about my writing grammar and everything. I read many articles and had discussions with others to get an idea of how to word myself. It was an excellent opportunity to learn and reflect, but it took time to figure out the best way and manage myself.

These individuals took control of the process of learning and aligned it with their conditions and capabilities. By continuously evaluating the process of learning and constantly monitoring the process and outcome of their learnings, participants actively improved their learning process and modified the desired outcomes.

4.2.2 Critical Reflection and Reflective Discourse Practices

Throughout different phases of a career change, participants of this study critically assessed their actions and perspective due to their situation or actions they performed. These reflections mainly occurred on their perceptions, decisions, values, and actions multiple times through the process of transition.

While going through career changes, participants interestingly became open-minded toward their environment. They were ready to consider new perspectives in personal and professional aspects of their lives. For instance, going through a passion exploration, Emilie assessed the possibility of being an entrepreneur by evaluating her assumptions toward this type of career:

I always thought that I needed a lot of experience and a specific idea to be able to start my own business. Even in Canada, I had that in the back of my mind that I was envying people having a start-up that is smart having a tech-related business that could solve the

issue of people. Then I figured out that my idea may not solve the issue but makes people happy. If I can make money and hire other people, that is great, and it is what I want.

Previously, her perception of entrepreneurship was about initiating a business that could impact people's lives in many aspects; therefore, based on her realization, she never could start a company that could have that level of impact on others. However, throughout the exploration and coming across other small businesses, she critically reflected on her perspective toward an impactful business in different stages. As a result, she initiated practical entrepreneurship as a career of her own which served her passion of helping others.

Similar to Emilie, Ehsan's perception toward the achievability of career change evolved by exposing himself to the perspective of others and new possibilities:

Back home, I looked around, and my father, uncles, anyone older than me was always too busy to think of possibilities to do in life. Over there, you would not even think about a career change as an option if it would not occur to you. I would not think of a change if I was still there. I thought that was the way a career is. With that, it makes it a lot tougher to think of options for your life. But, here, looking at others made me realize that there is a possibility.

In the previous perception of Ehsan from a career change, having a career and trying your best in that direction was all he could think of. However, after the trigger event of his career, he became more receptive to new ideas and possibilities. By looking at others and revisiting his assumptions of a career change, he embraced the idea of it and took the necessary steps toward achieving it successfully.

In addition to reflection on perspective, some participants critically reflected on their values and attitudes, constructed new meanings out of their assessments, and adopted them as new values of themselves.

Maira contemplated her values and attitudes about vulnerability, which formed through her years of work experience in the oil and gas sector. Essentially, she shaped the importance of vulnerability as a negative emotion that only an under skilled or a novice individual may express. By revisiting the concept of vulnerability and transforming it into a positive emotion, she could understand the worth of resources and knowledgeable people around her and leverage that in her learning and development:

I used to hide what I did not know, and I would go search for it and try to figure it out and ask someone who would not use it against me. I was afraid to be judged. When I was learning for a new career, I started with the same attitude. But after a while, I realized that it is not what others do in their learning in computer science. In the beginning, it was hard to ask for help; eventually, I was ok to be vulnerable and do it.

A critical change in Emilie's value system was another example of how this change may lead to transformative actions by participants. Indeed, during the crucial time of exploration, she focused on the passions and values that matter to her most. Eventually, by redefining her value system, she pictured a career that resonates with her the most. The significant realization for her was that she did not know what types of principals she valued for a career:

Before, I thought that earning money was a good enough excuse to work in any condition. There were so many things that were against the values that were unknown to me at that time. I thought I was too sensitive, or I was not trying hard. Later I found out that everybody has values of their own. When I realized what matters to me, I decided to

never cross them by choosing the wrong career. By knowing this, I knew that I just needed to try different things based on values, and I will be ok with the rest.

Indeed, exploring new possibilities led her toward critically examining her principles and the effort of constructing a new meaning of a career to her. Similarly, Moh's principles about working for a corporate sector transformed once he considered a job in that sector with a different framework; "I figured out that the academic world is not what I want to do anymore. I want to see an immediate change that I can make in the world to make it a better place. I want to find my place in the world."

Turning to an open-minded person in terms of new opportunities, Ditia's critical reflection during her transition period turned into a vital transformation of her perspectives and values toward her own identity. It changed how she situated herself in society; "previously, I could not talk about my sexuality. After learning through social studies, I started not to care about others' opinions anymore. I realized who I was, and the rest did not matter anymore." Her transformation about her sexual identities empowered her perspective to support and help others who need help.

Furthermore, reflective discourses appeared as a significant effort of participants to evaluate their assumptions and, as a result, construct new meaning that transformed their perspectives and values. Through the process of career change of participants, their conversations with experts and individuals of their personal and professional network inspired them to change the way they look at problems. These conversations helped them critically examine their assumptions, values, and attitudes toward evolving a better understanding of a desirable career. The idea of starting a new career in software engineering became more realistic to Alma after a conversation with a friend. In the case of Alma, it did not appear to hear that she

would be able to do this type of transition before her conversation. In her perspective, this type of change to software engineering was too late for her, and she might not be successful in it. However, the conversation provided her with new perspectives on her abilities and possibilities of this change.

Similarly, Ehsan's perspective essentially changed after a couple of reflective discourses with others: "you talk with people and realize a change is a possibility. Why did I not think about it before? Why did I always think that I should stay in a career forever? Just because I spent years doing that?" Before these types of dialogue, Ehsan did not consider transition as a possible option; instead, he tried to learn new skills related to another engineering in chemical engineering to work in positions more than his current one.

Likewise, reflective dialogues for participants, including Kam, Maira, Sabtu, and Emilie, led to a transformation of their understanding of the career change and the possibility of that. During their discussions, they were introduced to new points of view about a new career and what a change in a career means to them. Therefore, they critically assessed these new standpoints and constructed personalized meaning out of these new perspectives.

4.3 Contribution of Self-directed Learning to Career Change

Most participants illustrated that they had developed characteristics attributed to a self-directed learner during the career change. Once they reflected on themselves about attitudes and perspectives of the previous career with the new one, that could indicate their development. Indeed, applying self-directed learning strategies enhanced participants to facilitate their career change and supported them to develop characteristics beneficial for career growth. In this

section, I explore participants' developed characteristics and perspective changes that are useful for career development.

4.3.1 Immigrants' Characteristics Development as Learning Outcomes

Taking Responsibility for Own Learning. Most of the desired careers by participants required upskilling or learning new knowledge through formal and informal training or a combination of both. For these learnings, participants actively took the responsibility of learning; they took the initiative to identify the required skill and knowledge, distinguished their skill gaps, explored proper resources for knowledge and skill development, and planned their learning throughout the transition process.

Because of the previous oil and gas work experience for Horia, practice on initiating self-learning and taking responsibility was challenging at the beginning. In her previous experience, she completed a straightforward path of formal education and later found a job in the same field that she studied. After she got employed, she only took training that her employers offered. Therefore, she never experienced planning her learning of new skills. Throughout the transition, she developed the skills of planning her learning based on the skills or knowledge gaps she discovered: “during the transition phase, I realized that I have to be responsible for my learning. I can say the fact that I accept being more responsible for my learning played a huge role.” Indeed, she admitted that she had to assess her current skills, address the gaps, and then customize a learning plan based on her own needs.

Most participants of this study performed these activities to leverage their previous skill sets while adding new ones. Likewise, Viraj decided to take the master of the economy to begin

his career change; he realized that the career path would not be the same as an individual who just finished his undergraduate study in the economy:

I remember that in the first three semesters, I barely understood the courses because I did not have the background. I talked to professors for more resources to read, attended many conferences and events to expose myself more to opportunities and hot topics, and attended undergraduate courses to get those backgrounds. I also talked to one professor to get some projects by which I could expose myself more to that field.

Viraj proactively planned extra steps to address the gaps and weaknesses, like any other individual who is making a transition from another career. Generally, most participants who chose formal education as the mainstream for skill and knowledge upgrading became mindful of their learning process and directed their learning toward their actual needs.

In addition to formal learning that participants pursued, many actively took informal learning through online training courses to broaden their knowledge and skills required for a new career. While enormous training material via various learning platforms was available to them, their challenge was to customize their learning and get the most benefit out of time and available resources.

Moh is an excellent example of an individual who successfully evaluated his weakness and strength and wisely selected online training courses by which he could reinforce his skills:

I learned through an online learning platform with great courses explaining the concept and tools regarding my interest field of study. Those courses helped me have a better perspective on all of that general knowledge and my previous knowledge on fundamentals of data science.

All participants successfully planned and executed their learning strategy via formal or informal education. Indeed, for most of them, this was the first time they had to go out of a straightforward learning pathway to design customized learning plans that could help them succeed in their career change.

Self-confidence. Going through critical reflection and evaluation on their abilities and skills, individuals successfully build up their self-confidence along the transition process. They encountered a challenging pathway toward landing a successful and new career again, starting with adverse events in their career. Indeed, these challenges impacted their self-confidence, which they later gained by critical reflection and assessing their ability along the journey.

Most participants admitted that in terms of their self-confidence, they had a roller coaster journey. Alma reflected on her self-confidence that:

At first, I had many doubts about myself. I had some feeling that I may not find a job, everything would never be ok, and I would never find a job. At some point, I was getting my feet a little wet and moved to a deeper learning area. As you go forward, get interviews, learn more and collect more information, and get to know the language of the new field. As you can speak that language more fluently, you are more confident about it.

Likewise, Horia admitted on her self-reflection on self-confidence along the journey:

I am a person who doubts myself a lot, and I question every move I make. But in the last year, my reflection helped me realize that I should rely on myself more and be more responsible, accept the consequences, and let myself be vulnerable and responsible. That kind of path generally made me confident, and my self-esteem increased.

Like many other participants, when they took some initial steps toward a career change, they reflected on their experience and gained self-confidence in their ability to learn independently. Indeed, these small first steps turned out to be a driving force for their next steps.

Openness and Flexibility. Participants of this student demonstrated different levels of flexibility and openness along their career change journey. While they began exploring new opportunities, they also changed their perspective and assessed all possibilities. A great example of this type of character in participants is those who decided to try out opportunities in other cities and markets. By changing their environment, not only they exposed themselves to more opportunities, but also it led them to become more open-minded about options they had never thought about before.

Kam, Ehsan, and Sam are three examples of individuals who made these moves to expose themselves to more opportunities. Ehsan reflected on his move:

I remember the day that I was out of jobs, and I was unhappy, the day after I decided to move to Toronto. Immediately I started thinking about the next steps and looked around and did a lot of research, and honestly, I saw this and knew that it was going to though at least a year of going through hardship. I knew that at the time. But I looked at it as an opportunity to have some challenges and some excitement.

To be able to try out other possibilities for a career, he decided to sacrifice his comfort living in Calgary as a homeowner to live in a rental home in a crowded city like Toronto with many limitations that brought to his life. Similarly, Kam and Sam decided to take risks of moving to new cities and sacrifice similar comfort in exchange for being open to new opportunities.

Other participants also made some sacrifices to be open to other possibilities. For example, Moh was a professor in his field while he was forced to choose another career and start working as a data scientist in a small start-up. He admitted that although he found the new environment hard to cope with, he was still open to new opportunities and wanted to be flexible to gain a proper long-term career:

Imagine you are 38 and hold a Ph.D., and you go to a new career designed for a fresh graduate; so, your boss would be somewhere in their 20s. With a lot of knowledge and experience, you have to do something lower than what could be done. It is tough to cope with that. Yet, when you look at the long run, you know that you can do that to gain more.

Individuals who were already experienced in their previous field of work had to become new learners, start with a junior position, and begin with a new career. Their flexibility in making short-term sacrifices has become a great asset for these individuals to gain a long-term career in an industry they desire to work.

Dealing with Ambiguity and Developing Resilience. One of the main characteristics of self-directedness that participants demonstrated was dealing with ambiguity and resilience. Most of these participants either lost their jobs or were closed to that situation without a clear outlook in the uncertain Alberta economy. However, throughout crises to their career, these individuals adopted coping strategies by which they effectively dealt with emotional and adverse effects caused by ambiguous situations.

The outlook of entrepreneurship for Emilie was unclear for Emilie once she decided to try this pathway. She was unsure about her business products, the regulations involved with having a business, and the financial outcome of her decision. Yet, after her exploration and

transformational conversation with other entrepreneurs, she developed skills of tolerating ambiguity and emotions that come with it without having a complete picture of the future:

I acted on many steps of my way without knowing much about the outcome. Once, I was trying to develop a sellable product, I remember nights that I could not sleep because of the stress involved with that process. Yet, I started to like what I was making, and that was enough for me to keep going; I eventually had a product, and I just needed time to catch up with everything to ignite my business. Knowing that I have a product and I can do, changed a lot. It helped me to get started with business and get over my fears.

Similarly, Sibel felt the same way after she changed her perspectives and learned how to deal with uncertainty:

I learned that it is ok not to know the next steps. I was always annoyed that others knew what they wanted to do in their career, while I did not. I realized I need to go with the flow, see what life brings you, and know what you have accomplished so far; you can always change and try other things.

Likewise, Horia reflected on her attitude change toward uncertainty with a similar perspective:

I learned during this transition to accept that I may feel uncomfortable. I learned to stay at that moment, acknowledge the discomfort, and figure something out. Before, I blamed myself for not figuring out the next step. Then I learned to be in the moment and reflect on the situation, and then change the strategy and play the game one more time in a different way until you succeed.

Indeed, individuals who are skilled at coping with ambiguous situations feel competent to take actions without knowing the details of the consecutive outcome of their actions. They can take risks and feel comfortable with uncertainty. Indeed, these individuals learn to move forward

with their career change without knowing the whole picture of their future, taking risks, becoming confident with their decisions, and thinking out multiple plans for their futures. At the same time, they are ready to change the course of actions and embrace changes in their environment.

Apart from dealing with ambiguity, these participants successfully expressed resilience along the career change journey. In the middle of the economic crisis, participants assimilated their uncertain career situation and adapted to changes, and adjusted their plans as needed to have a tiring professional life.

Most participants of this study reflected on their various stages of a career change. They admitted how they became resilient amid negative aspects of a career change due to an adverse event. In the case of Alma, she recalled her negative experience of rejection self-doubt and acknowledged that she went through these gloomy days of setbacks:

There were a lot of ups and downs and insecurity, and it became a mental challenge for me. I got rejected from many job applications and even judged my decision to change. Questions like, why do you want to move? You got bachelor's and master's degrees in this field, and suddenly, you say you want to move to another field. I even judged myself about the time I spent on that field and how come I could abandon it. But I kept telling myself that it was just the negativity coming in my path and I should keep the positive side.

Similar to Alma, Kam repeatedly judged his career change decision along the journey, yet they proactively applied a coping strategy that helped them get back on their track:

I constantly had to convince myself that the four years of working experience in Alberta was not a waste. To tell me that there are still many professional skills I will transfer to a

new job, which will be an asset for me. Then I convinced myself that it was not that bad, and I will learn many new things.

In addition to coping with these mental setbacks, participants also had to deal with financial constraints as negative sides of new opportunities and bounce back their positive attitudes. Ehsan contemplated his challenging days and referred to various coping strategies he applied to remain positive and effective amid those hardships:

When I moved to Toronto, it was tough, financially and personally. I had to give up my house in Calgary and live in a basement in Toronto to reduce expenses since I did not have income. I knew I had to get back to my best version of myself. Instead of being locked up in a basement all the time, I decided to get out and be active while I studied for a new career; I registered for dance classes teamed up with new people to play soccer. I tried so hard to keep myself busy and keep my spirits up.

Other participants, including Horia, Mo, and Emilie, also experienced mental challenges coping with the uncertainty of their careers. Despite all the negative thoughts, they maintained a positive attitude, developed an influential network, embraced continuous learning, and focused on their goals to avoid derailment from their pathway. Although they experienced critical challenges along the way of career change initiated by trigger events, they bounced back and took control of their learning and career planning.

Adaptability. Adaptability was an ultimate characteristic of participants that appeared because of a career change journey. Almost all participants of this study demonstrated that this journey exploited adaptability skills to turn a negative situation into a positive opportunity they mostly desired. Once an adverse event happened in their career and encountered an

unforeseeable future, these individuals changed their actions and approaches, learned new concepts, took new challenges, and directed their career toward a more sustainable pathway.

Sabtu's adaptability experience at the time of uncertainty is a great example. Being more than 15 years in one industry, his career was too stable for him to ever think about a change. However, once he was forced to explore a new job, this situation brought him unexpected skills along with a new career:

I used to enjoy being in a stable career, and I used to think that I would retire with that career. But when the recession happened and I was forced to choose something else, I had to go out of my comfort zone and change many things in my perspective, attitudes, and behaviours. I can say that now I am comfortable with the change since I experienced it and learned many things.

The adaptability of these individuals goes beyond their actions during a career change. Not only these individuals took measures to make changes, but also, they transformed their perspectives and attitudes toward change in their environment in general. By having the experience of adapting to a new environment and taking control of their career, they learned to become adaptable and flexible to any uncertainty coming their way and turn into a unique opportunity. Kam's take away from his transition journey indicated his adaptability skills that have developed through it:

If you are afraid of heights, go to a high place and jump. I was afraid of change. I thought I started in environmental and air quality, which I would want to do for the rest of my career. Now that I changed it once, I can see I got the courage to change it again. I see that I can do it regardless of if it is going to happen again or not." Having this opportunity

and considering other options is something that changed my mind. Before, I was like I am limited., but now I can choose which way I should go, and I will be flexible to do it.

Most participants admitted that although this experience was a very new, challenging one for them, it empowered them to become ready for the following situation that may happen in the future. Alma reflected on her attitude toward change and how it has transformed through the journey:

When you go through a challenge, you feel more confident after that; because I changed the area once before, it makes me a more dynamic person now. From an Alma like five years ago who would be reluctant to change because she never did it, now I feel more dynamic about myself.

Similar to Alma, Maira felt the same way about her first career change experience and how it gave her expertise to embrace a second possible one:

I think the first change is always the hardest one. You do not have any perspective on what comes after that. But after you do the first one, you gain more confidence about changes, which would be more desirable with better growth. Even if you do not like it, you would not feel that it is a mistake. I should say that it helped me to understand I already had a big challenge, so I am ready for a new one.

In her perspective, she learned to look at change as a new opportunity for growth instead of a situation to handle hardly. Later in her new career, she came across a minor career change, and surprisingly, she considered that an excellent opportunity to learn new skills and explore new areas.

These individuals experienced a dramatic change in their environment that pushed them toward changing their pathway and taking a course of action to adapt to new situations.

Consequently, instead of going off the track and taking no steps, these individuals took the initiative to navigate the change amid ambiguity, became flexible to new opportunities, committed to learning and development, became willing to take risks and make mistakes, and constantly reflected on their process of learning and development. By doing that, they developed a skill of adaptability that empowered them to navigate any complex or uncertain future.

4.3.2 Perspective Change toward Career Development

Besides critical reflection and reflective discourse practices, one of the significant transformations of participants during career change was correlated with the context of career development. Participants of this study reflected on their journey of change and compared the meaning of career development in previous careers with their new ones. For most of them, career development was intertwined with learning opportunities provided by their companies or those they pursued themselves. Indeed, most participants indicated that the lack of opportunities for career development was a negative factor for them to initiate learning activities regarding their profession proactively.

Because of the traditional context of the oil and gas sector, most employees would not need to learn new knowledge and skills to do their tasks. Therefore, career development was mainly defined as moving upward positions or ones in other companies. However, most target sectors of participants had different principles toward upskilling and learning new knowledge by individuals. Most of these industries were involved with technological advancement; therefore, people have to constantly keep their knowledge and skills up to date. These differences in the context of a career in other industries gave participants a broader realization of new possibilities for a passionate career to develop.

Consequently, it is safe to say that a company's learning culture deeply impacted the perception of these participants about learning and development in their careers. The more the company's culture offered challenges and opportunities for new learning, the more participants actively changed their perspectives and actions toward upskilling and learning new knowledge. As an example, Maira reflected on her understanding of career development once she was employed in the oil and gas sector:

In my previous career, I wondered how people could work in a company for ten years and not get bored and frustrated. At that time, I did not have much of a challenge, which was why I was tired of my job. At that time, during interview questions, they used to ask, what do you see yourself in five or ten years; I remember I was thinking I could not imagine myself doing this job for 5 to 10 years since it had nothing to offer.

The environment and culture of her previous workplace never offered any professional development outlook to her; therefore, she never developed any vision for her career other than a source of income. After the transition experience, her realization of career development dramatically changed once she was situated in a new environment in which the development of skills and knowledge mattered; "in this new career I never get bored. In the next 5 to 10 years, I am planning to experience and learn a lot here; this career offers me a great learning curve, and I will not change it for more challenges."

Horia and Sibel had a negative perspective toward career development in which they had to fight their way up to the hierarchy of a company to achieve a better position. For Horia, she perceived that career development was to move the corporate ladder upward, while her perception became more subjective after her transition; "previously, I thought that there are certain hierarchies I need to go up. Right now, although there is a hierarchy in my path, I do not

necessarily want to follow that; instead, I get to choose my position with passion.” The effect of the change eventually helped her realize what she wanted from a career and how to develop it.

Likewise, Sibel was deeply impacted by her perception of career development while she worked in the oil and gas sector. For years, she worked in a company that lacked encouragement for young employees to try different paths to figure out their interests and develop their skills. Therefore, this environment became the reason that she never thought of growth in her career unless she could fight for a new higher position in that company:

In my past company, I had many positive aspirations as a young person when I started there. I tried so hard. I worked so hard, and I was close to being the supervisor that I am today. It took me two years to fight it to get it. This company never encouraged me or even supported me to get it when I was entitled to get it. Now, I know that it is important for me that the culture allows you to learn, and you feel that people are there to support you for the next level.

Comparably, the new surrounding environment became a driving force for Kam, Ehsan, Sibel, and Sabtu to broaden their understanding of career development, involve themselves with more self-learning, and proactively plan their career development. While they barely took courses or work-related training in the oil and gas industry, their new sector led them to think about their learning and development and assess their skill gaps to address them with relevant self-learnings.

4.4 Barriers of Career Change via Lenses of Immigrants.

Apart from barriers that an individual may encounter during a career change, immigrants of this study experience extra barriers due to being an immigrant of Canada. In this section, I

elaborate on challenges that participants encounter during their career change because of being an immigrant.

4.4.1 Culture of Networking

Professional networking was one of the main challenges of most immigrants in this study. According to their reflection, most of them found it challenging to conduct professional networking for a new career effectively. Sabtu admitted that it was very challenging for him to find common ground to converse with people in the new field. “Culturally, I do not have common things to talk about with them; I do not know about hockey or other sports or other interests to start a short talk.” Similarly, Maira had the same problem at starting the first job in the new career:

In tech companies, there are mostly white people, and it is tough to connect with them about life or work. We are from different worlds, and due to different cultural backgrounds, it is still hard to establish rapport with coworkers and professionals. I would say if you do not reach out to people, they would not come and talk to you.

These immigrants had a different experience of career development in their previous careers. In their back home, the culture of networking was not a central part of the job-seeking strategy; therefore, most immigrants landed their jobs based on their experience or applying with their resumes without utilizing the networking culture dominant in Canadian Culture. Through the process of first professional jobs in Canada, whether they made some networking effort to land a job or relied on their expertise, they never had a chance to develop the networking skill properly. In contrast, a Canadian-born in the same situation might have had the typical career

development trajectory and has developed this skill. Therefore, these individual immigrants felt a culture of networking toward a career change.

4.4.2 Language and Communication Skills

Some participants, including Maira, Kam, and Viraj, declared that language and communication skills became challenging through the career change journey. Maira reflected on the time that she was learning a new context and recalled the difficulty of learning a new career in the second language; “learning in a different language could be frustrating, I had to translate a lot of basics and fundamental knowledge to my language to understand it better.” Indeed, in terms of learning a new context, the process of learning new concepts for a career change could be way more time-consuming than the one for Canadian-born individuals.

In addition to the challenges of learning new concepts, developing practical communication skills in the new field of work may take longer for immigrants than for Canadian-born. Kam and Sam admitted that learning the right technical words in the new field takes time to develop those skills. Similarly, Viraj had the same issue at the beginning of his new career; “You have to know how to connect with your coworkers in a new environment or present one difficult concept in a way that is understandable to everyone and also speak and write professionally.” The challenge involved learning new technical phrases and words for these immigrants while using and delivering new context in the new workplace culture. Moreover, having English as a second language negatively influences the self-confidence of immigrants through the process of transition. Sibel mentioned that: “no matter how hard I try, I am still not a native speaker, which affected my self-confidence.” Apart from what individuals, both Canadian-born, and immigrants, need to learn through the transition process, immigrants have to

learn extra about the language and proper communication skills in the new environment, which may impact their self-confidence through the process.

4.4.3 Financial Insecurity

The financial insecurity of immigrants was another challenge that could hold back immigrants from moving forward toward an effective career change. While going through a career change may require good savings, most of the study participants were not in Canada long enough to have a good savings for a career change. During the first years of landing in Canada, immigrants mostly have to use their savings while settling in Canada and looking for a job. Many of them may have a small portion of savings since the amount would be much less after exchanging their currency to the Canadian Dollar. Having said that, during the first ten years in Canada, it is challenging for them to secure enough savings that ensure them a few months of exploring new opportunities while they are unemployed. Maira disclosed that: “Immigrants need to be sure that their income is safe because we did not have time to save up enough here. I had savings in my back home, but after exchanging it to the Canadian Dollar, it was worth nothing.” In her case, to take the risk and shift her career, she had to work part-time in retail since she did not have enough savings to cover her for the transition period.

Similarly, Emilie had the same struggle of having enough savings while doing a transition. Because of instability in her previous career, she never had a chance to secure savings to focus on transition while she was unemployed. Therefore, she had to work in retail while she was exploring the idea of entrepreneurship.

4.4.4 Admission Requirement of Formal Education

A few participants pointed to the admission requirement of universities as a time-consuming challenge toward their formal education for a new career. Indeed, for Canadian-born individuals, the process of applying for a graduate degree may take a few documents that they obtained from a previous institution. In contrast, immigrants require providing an English exam along with some records from their previous educational institution. Sabtu reflected on his experience in which he had to apply for a master's degree in data science; "getting a transcript and documents from my country was challenging. If I were Canadian-born and went to university here, I wouldn't have had these challenges. It took my time because they were not familiar with the process of other universities."

Immigrants who choose formal education as a proper upgrade for a career change have the extra challenges of going through the lengthy and complex process of applying for a university in Canada. While they already have worked and lived in Canada, they have to attain a language certificate, which may take an extra month to acquire. Additionally, since their previous universities are outside Canada, they have to get involved with a complex process of communicating with both universities to get timely results. Consequently, these lengthy processes turn the formal education of immigrants into a more complex one compared with a Canadian-born.

4.4.5 The limited Time of Career Establishment

Some participants reflected on their concerns about the time limitation to develop their career due to being an immigrant. In Moh's perspective, immigrants have already lost a period to develop their career due to immigrating to a new country: "Being an immigrant can be bad

because you are already behind; you start from scratch in your 30s which is not a good thing.”

When immigrants compare their career progress with others in the same situation, they are concerned about the time they lost to develop their career; they immigrated to a new country and started with some lower positions that they could have had in their country of origin. Alma reflected on her experience:

Maybe if I were in this country in my 20s with the Canadian educational culture as a privilege, I would have made the career I wanted, like what I am doing now in my 30s. I could have been way ahead if I had done that at that time.

Through the process of a career change, Immigrants felt the pressure of exploring their options in a short amount of time; in that case, they would not stay further behind in career development once they compare themselves with individuals of a similar age.

4.5 Summary

To sum up, I presented four major themes revealed by this study corresponding to research questions. First, all participants experienced a trigger event that led them to think about other possibilities to have a long-term career. Reflecting on these critical events, participants revealed their motivation to pursue a new career by initiating formal or informal education to learn new knowledge and skills. In the second theme, I presented strategies these immigrants applied to manage their self-learning through the transition process. Additionally, I elaborated on changes in their perspectives, attitudes, and values due to multiple critical reflections and reflective discourse with others. Indeed, participants of this study admitted significant changes occurred in their vision for their career development in the future. Third, I explained various characteristics of self-directedness that participants express while dealing with the challenges of

a career change. As a result of a career change, these positive characteristics of self-directed learning helped them embrace other situations that came toward their lives and empowered them to adapt to changes in their surroundings. And finally, I elaborated on some significant barriers of participants caused by being an immigrant in Canada.

Chapter Five: Discussion and Conclusion.

This qualitative case study explored the self-directed learning experience of skilled Canadian immigrants during a successful career change in Canada. These immigrants mainly had a solid educational and professional background and conducted their career change between 5 and 10 years after landing in Canada. This chapter discusses findings concerning research questions and examines their connection with relevant literature. The research results are represented and discussed in four significant foci: external and internal factors that triggered career change, learning strategies that participants developed to make the career change possible, learning and development of individuals as the outcome of applied learning strategies, and barriers of skilled immigrants toward a career change. Later in this chapter, I elaborate on the implementation of this study and suggestions for future research.

5.1 External and Internal Factors as Initiators of a Career Change

5.1.1 Trigger Event

The analysis of this research data revealed that the notion of a career change was ignited by an event that left participants with no choice but to think about a new career. For this qualitative case study, I deliberately bonded it with the geographical situation of participants in Alberta to examine the impact of an uncertain economy on the career change of individuals. Consequently, the result of this study indicates that the uncertainty of Alberta's economy negatively impacted the previous career of individuals and forced them to take pivotal actions.

After five years of the economic boom between 2010 to 2014, Alberta's economy experienced one of its most significant recessions in history in 2014. More than 100,000 jobs

disappeared in the construction, mining, oil and gas, and professional services sectors (Tombe, 2019). Alberta's economic recession impacted individuals who worked in developmental projects firsthand. Later, the wave of recession reached the sectors connected to the oil and gas industry with a few months' delay. Therefore, most jobs in Alberta were negatively impacted by the wave of oil price drop with no bright future outlook.

Most participants of this study had the opportunity to land their first professional job in Canada and develop their skills and knowledge in the dominant oil and gas industry once Alberta's economy was booming. However, the recession of the Alberta economy impacted individuals who worked in developmental projects first, and later, the wave of recession reached the sectors connected to the oil and gas industry with a few months delay. These participants only had a few years' opportunities to establish and develop their careers once the unexpected recession hit the economy. Not only did the recession and consequently the uncertainty threaten or take away the current job of participants, but it also adversely altered their employability and the market for their specialties in the future.

In six cases, participants explored new career opportunities after being laid off from their professional careers in the oil and gas sector. Kam's and Ehsan's layoff and the lack of options in the market caused them to rethink opportunities in other industries and outside Calgary and move to a new Toronto and start a new career in a new sector. Alma and Sabtu's gradual loss of the oil and gas position forced them to revisit their skills and knowledge and explore opportunities for a professional career in other sectors. The unexpected event in their career caused them to think about their original passion that they always had once they were young adults and take the opportunity and seek possibilities of turning their passion into a new career.

In the case of Emilie and Maira, they consistently tried to find new positions in their field of work for a while. However, after being laid off for a second time, they realized that it would not be possible to continue a sustainable career in the oil and gas industry. Consequently, despite their hard work to stay in the industry, they were forced to look for opportunities outside that industry or even related ones. These six participants experienced job loss, and the lack of new options became a disjuncture event that initiated their career change.

For other participants, the economic recession of Alberta and its consequences on other industries of Alberta had a different impact on their career future. Although they were not laid off from their job, their future jobs were negatively threatened by the waves of recession in the future. In the cases of Sam, Ditia, and Viraj, their future employability and outlook of their career became unpredictable. When the recession hit Alberta, these skilled immigrants were researchers at the beginning of their career in Canada, expecting to land a promising job in the Albertan corporate sector. This event caused them precarious employment in the future in which they could not gain and develop work experience, essential skills, and knowledge related to their profession, at least in the short term.

Similarly, the instability of Alberta's economy and its impact on Sibel's career future and the possibility of development caused her to revisit other career possibilities. In Horia's case, the hostility of her workplace as the result of the economic impact on her company forced her to initiate a career change. In Moh's case, the indirect impact of the economy on the educational institutions of Alberta caused him a career that he pursued, planned, and developed for a long time. While he always had an impression that a faculty career is one of the most secure jobs in Canada, he unexpectedly came to realize that this was not an accurate perception anymore.

Therefore, this event caused him to think about a career change and initiate it for the first time in his career.

Mahoney and Montoya (2020) referred to an event in the context of a case study research as “a contingent event that is causally important for an outcome in the specificity case” (p. 2). With regard to critical events, Mertova and Webster (2020) consider specific events in the lives of individuals as critical ones because of “their impact and profound effect on whoever experiences such an event. They often bring about a radical change in the person” (p. 63). Adult learning literature refers to critical events as disjuncture, disharmony, and disorienting dilemmas individuals may experience throughout adulthood (Jarvis, 2006; Mezirow, 1991). According to the learning model of Jarvis (2006), once individuals encounter critical events, positive or negative ones, they find it challenging to overcome these events with their previous skills, knowledge, or perspectives. Mezirow (1978) referred to this situation as a disorienting dilemma and stated that:

There are particular challenges or dilemmas of adult life that cannot be resolved by the usual way we handle problems—that is, by simply learning more about them or learning how to cope with them more effectively. Life becomes untenable, and we undergo significant phases of reassessment and growth in which familiar assumptions are challenged and new directions and commitments are charted. (p. 101)

Jarvis (2012) indicates that once individuals would not be able to cope with critical events by applying their previous learning, they start to “think, to plan, or to learn something new” (p. 93). These critical events trigger new learning opportunities in various capacities for individuals. Indeed, “the inability to cope with the situation unthinkingly, instinctively, is at the heart of all learning” (p.35).

Each participant of this study experienced a sort of critical event, which turned into a disjuncture that ignited a need for learning new knowledge, skills, and perspectives to cope with the ambiguity and instability of the Alberta economy and its consequences on their professional lives. All participants admitted that by the occurrence of recession and its impact on their career, they felt an urge to explore alternative opportunities and initiate learning new skills/knowledge or change/transform their perspectives regarding taking control of their career in an uncertain economy. It is worth mentioning that some participants also indicated that they would not have considered a career change if these events did not happen in their professional lives. Most participants admitted that they would have stayed in their previous career and took the typical career trajectory that everyone expected to happen in their profession.

5.1.2 Motivation and Needs Fulfillment toward New Possibilities

The motivation of participants to initiate learning and developing new skills and engage in various forms of learning activity was ignited by a significant disjuncture in their career. However, it was mainly maintained throughout the career change journey by their internal, external, or specific needs associated with their professional and personal lives. Jarvis (2006) emphasized that at once a disruptive event occurs, it is a choice of individuals to address the disjuncture and initiate new learnings or adjust their situations based on current knowledge already acquired. One of the significant factors that differentiate these participants from other individuals who stayed in their career is their motivation to drive an important change in their career.

Garrison (1997) portrayed two types of motivation in the process of self-learning in adulthood, entering motivation, which refers to the way individuals decide to enter a task, and

task motivation, which refers to the attempts of individuals to consistently continue the task and complete it properly. In this motivation section, I discuss the results correlated with entering tasks. I will discuss task motivation in self-management and self-control that are part of a self-directed learning process.

Results of this study illustrate that participants' decision to participate in various self-learning activities was influenced by three types of physiological needs, intrinsic motivation, and extrinsic motivation. Deci and Ryan (2012) clarified that fulfillment of the need for competence, relatedness, and autonomy contributes to individuals' holistic growth and development. In their definition of these three types of physiological needs, individuals "need to feel competent in negotiating their external and internal environments; they need to experience relatedness to other people and groups, and they need to feel autonomy concerning their own behaviours and lives" (p. 78). All the study's participants illustrated a lack of fulfillment of these needs during their previous careers, by which they became motivated to take action to address their needs.

In the context of Alberta's recession and uncertain future of its dominant sector, individuals in this sector encounter dramatic and negative changes in various aspects of their career, including the workplace culture, professional development, job opportunities, and working hours. These emerging and negative situations deeply limited them in controlling or guiding their career toward the desired path. Consequently, individuals' autonomy was threatened due to lack of control over their career, limitation of choices, and urge to direct their own personal and professional lives. To acquire a sense of autonomy in their environment, participants initiated critical actions and addressed the need for autonomy in their career trajectory. Uncertainty in the future of previous careers and a need for control over a career impelled six participants to explore new career opportunities after years of work experience in

the previous ones. Individuals encountered limitations of career development such as a freeze on training programs, decreased working hours, fewer future job opportunities, more responsibilities for tasks that were less relevant to their job, and more pressure in the workplace due to layoffs of coworkers and assigning their tasks to them. Although these participants had years of experience in their previous careers, the lack of autonomy toward controlling their professional life led them to a new career opportunity.

In addition to the sense of autonomy, individuals felt a lack of understanding of belonging in their previous careers due to Alberta's economic change. Due to changes in the workplace environment in the oil and gas sector, work culture also took a negative turn. Four participants admitted that critical changes in the organizational culture forced them to think about other career opportunities since they could no longer relate to the value of their company or the people around them. Horia indicated that her manager's behaviour as a typical role model in the ever-changing oil and gas industry made her realize that she would no longer be able to work in that industry. Similarly, Emilie indicated that the worsening hostile culture of the oil and gas industry for her as an immigrant made her feel disconnected from the environment and pushed her to think through a new career. Comparably, Sibel's experience of exclusion in her workplace because of being an immigrant motivated her to look for new opportunities and learn new knowledge and skills in a different area.

Indeed, because of the downturn in Alberta's economy, these participants experienced negative workplace cultures that caused them not to feel related to their jobs or careers anymore. When they missed opportunities to maintain relatedness with their professional environment, they became motivated to seek a career pathway to be socially involved with the environment.

The lack of competence in career was another need that individuals felt once the economy took a downturn. The uncertain and unstable economy adversely impacted the training culture, innovation and creativity, and various opportunities for career development in the oil and gas industry. At least four participants reflected on their needs for professional growth and how it motivated them to seek pivotal change. These participants experienced this sense due to a lack of learning new skills and knowledge in their previous workplace. Once they could not project any learning and development for the career future, they decided to look for a career that would be more dynamic through the transformation of Alberta industries.

Individuals who still had a job encountered dramatic changes in their tasks, limitation in working hours, pressure to perform tasks that they had never done before without proper training, and excessive pressure on day-to-day tasks without any learning support. In addition to individuals still employed in the industry, those laid-off ones also felt the absence of competence in their professional life. The unknown future of a career without any available and promising opportunities threatens their needs for confidence and competence. The urge to address the lack of competence and confidence in their professional job propelled them toward a career change. Through the career change journey of all participants, this study revealed that one or a combination of these needs encouraged them to explore new learning opportunities and develop new skills required for a new career that they desired.

In addition to the three essential physiological needs for motivation, participants revealed signs of admitting to their intrinsic motivation as a driving force of making a change. Deci and Ryan's (2000) comprehensive model of human motivation illustrates a continuum in which individuals may illustrate three different levels of motivation to take actions toward their personal and professional growth. According to this model, intrinsic motivation refers to types of

internal interest by which an individual conducts an activity solely for passion and internal interest. At the same time, extrinsic motivation refers to carrying on an activity for a desirable outcome.

Signs of Intrinsic motivational behaviour are unveiled in the story of participants of this study. At least seven participants reflected on interest and passion for a new career in which the field of study was inspiring for them. Some participants already had a passion for a field of study, but they never had a chance to pursue that field as a career. Ehsan, Moh, and Viraj's stories are great examples. These participants carried over with a career that they did not inherently enjoy. Yet, they decided to stay on it and continue their professional growth until the trigger event of their career occurred.

Despite the negative consequences of the trigger event on their personal and professional life, their long-lasting interest in another field of study motivated them to move forward that pathway and learn new skills for it. Other participants' interest in a specific field emerged through the process of career opportunities exploration. The evolving interests of Alma, Sam, and Maira for computer and data science and their applications while exploring other engineering disciplines is a great example of individuals' intrinsic motivation. Similarly, Ditia is another participant who revealed a sign of intrinsic motivation for initiating self-learning for a new career. While exploring other options, she came across a career that she did not know was exciting. Her following exploration of this specific career ignited her passion and persuaded her to move forward with that career.

In addition to participants' intrinsic motivation for self-learning, I discovered financial constraints as a primary extrinsic motivation that drove all participants toward a change. Due to the consequences of Alberta's recession, many professional individuals in the oil and gas sectors

were laid off from their jobs without a bright prospect for their careers. It is worth mentioning that, compared with Canadian-born residents of Alberta, most skilled immigrants of Alberta did not have enough opportunity to save or to develop a financial plan for their future. Not only were they concerned about their unemployment at that time, but also their financial status was threatened by the less closed to no job opportunities available in the market for a long time. Therefore, these individuals took pivotal steps to initiate self-learning for a new career for a better financial outcome for the long term.

To sum up, in this section, I discussed three essential needs, and their combination with intrinsic and extrinsic motivation is the driving force behind the decision of individuals who decide to make a career change after a disjunctive event happened in their professional lives. Some individuals became motivated to initiate self-learning for a new career to address a need for competence, autonomy, or relatedness. Also, their internal interests and passion for a field of study or an urge for a desirable outcome of a new career were other motivational factors admitted by the study participants.

5.2 Learning Strategies for a Successful Change

The findings of this research demonstrate that all participants experienced self-directed learning through the experience of a career change. The process of shifting toward a new career involves reassessing the career, exploring new choices, gaining new skills and knowledge through formal or informal settings, and entering and establishing a new field of work by strategizing effective networking and job search practice. Once participants decided to move toward a new career, they self-assessed their current knowledge and skills and took steps to

address knowledge and skill gaps by formal or informal learning via online programs/courses or personal learning settings.

The self-directed learning process refers to the situations in which participants self-explored new career possibilities, learned new skills and knowledge mainly through informal settings (formal setting in few cases), and learned how to strategize job-seeking tactics for a new career effectively. From the perspective of self-directed learning as a process, self-management and self-monitoring are two cognitive and metacognitive aspects outlined in Garrison's (1997) self-directed learning model. In this model, self-management refers to activities that ensure the achievement of learning goals and the management of learning resources. Self-monitoring, however, refers to activities that involve monitoring the process and outcome of learning.

The findings of this study demonstrate that individuals illustrate the behaviour of self-management and self-monitoring throughout learning new skills and knowledge for a change. In the process of exploring new opportunities, learning new skills, adapting efficient job-seeking skills, effective networking skill development, participants manage what they need to learn, how to acquire it, and where to seek resources and materials. They also monitor their learning process and outcome of learning by applying three strategies of time management, goal setting, and self-reflection on the way they learn and what they learn.

Candy (1991) referred to self-management in self-directed learners as activities that show learners are capable and committed to directing one's own learning. Several participants reflected on how they proactively took responsibility for their learning and navigated resources on what, where, and how to learn. They mapped out effective and available material they need, types of education or certification they may require, and how they learn the most out of their time and resources. Sam reassessed his skills and defined what sort of new skills and knowledge

he had to seek out. As a result, he planned out learning strategies for his weaknesses and how to leverage his transferable strength to the new career. Mira and Viraj did the same once they figured out their skill gaps for a new career in terms of what and how to learn.

Participants also decided where to learn required skills based on assessing their available resources and preferences. Similar to what Alma, Horia, Ditia, and Sabtu conducted, participants consulted with experts, gathered information from websites or experts in the field, and self-reflected on their learning style to choose among available informal/formal or online and in-person learnings.

Additionally, participants practiced self-monitoring their learning once they thought out their learning gaps and needs. According to Garrison's (1997) self-directed learning model, self-monitoring is a significant aspect of self-directed learning in which learners consciously control, the learning process and outcome. Four participants reflected on their learning practice and indicated they mindfully applied time-management and goal-setting strategies to control what they learned and assess whether their learning was adequate for a new career. Among their adulthood responsibilities and time constraints, these participants effectively planned properly to study efficiently. Once they started their learning plan, these participants were all employed either with their previous employer or in blue-collar jobs. Additionally, they had responsibilities to fulfill toward their family members. Therefore, setting goals and managing time effectively was a great skill that they developed or utilized for the best outcome.

In addition to goal setting and time management practice, self-reflection is another significant action to empower individuals' self-directed learning. According to Mezirow (1991), individuals reflect on three content, process, and premise categories. Content reflection refers to thinking about an experience, whereas process reflection is concerned with dealing with an

experience. On the other hand, premise reflection is concerned with beliefs, assumptions, and values correlated with an experience. Participants of this study illustrated practices of all three types of self-reflection throughout the career change journey. Multiple exercises of premise reflections are the most significant and critical reflection of participants revealed through this study. In the following sections, I discuss this type of reflection.

5.3 Positive Outcomes of Self-learning during a Career Change

5.3.1 Positive Characteristic Development

Various studies have associated attributes including resilience, adaptability, self-efficacy, self-esteem, locus of control, and employability to self-directed learning (Botha & Coetzee, 2015; Coetzee & Potgieter 2014; Lent, 2013). Participants demonstrated that they had developed various characteristics and skills attributed to self-directed learning during a career change. The most significant characteristics that emerged are taking responsibility for learning, self-confidence, openness, flexibility, dealing with ambiguity, resilience, and adaptability to a change.

Participants mostly started their careers after finishing a university degree program in which courses were pre-chosen. Additionally, throughout their career trajectory, training related to workplaces was planned and offered by employers based on learning needs assessment generally conducted in their organizations. Therefore, most participants have not experienced a situation in which they choose the direction of every learning step. By reaching out to various resources to reassess their skill and knowledge gaps, participants practiced the new way of seeking proper learning, took responsibility for their learning, and acted mindfully to address skill gaps and prepare themselves for a new career. For example, several participants, including

Horia, Moh, and Viraj, took informal courses through open-source platforms after they self-assessed their own learning needs.

Self-confidence is another characteristic that participants gradually built up through the process of a career change. Starting with a disjuncture event that critically impacted their self-confidence in their future, these participants illustrated that they boosted it by planning learning skills and acquiring proper masteries for a new career. The disjuncture event in their career included many disappointments and rejection from limited to no available position and uncertain future. Additionally, entering a new career had the burden of not knowing what to expect next for most participants. While these factors negatively impacted their self-confidence initially, they were able to learn how to build up their participants by relying on new skills and careers they gradually developed.

Moreover, during the career change process, participants developed their capability of being flexible and open to new opportunities. At the same time, they dealt with uncertainty and ambiguity coming along with their decision and situations. Once trigger events occurred to participants, they became open to new opportunities and adjusted their situation to be flexible and accommodate new changes caused by uncertainty in their careers. For example, three participants found learning and work opportunities in other cities for which they had to move to other cities and downsize their lifestyle to afford to live in a new city.

Besides the flexibility and openness attributes, one of the significant outcomes of the career change of participants was developing the capability of dealing with ambiguity and learning how to become resilient toward abrupt changes in the economy and adapt to new situations. Individuals who go through a career change have contrived unprecedented events and situations that required specific coping strategies. Most participants illustrated abilities to tolerate

and manage ambiguity that comes with change, alter the course of actions promptly, act without having a vivid picture of the future, and be comfortable taking risks and accepting the unknown. By applying various coping strategies, these participants illustrated once critical events occurred in their career with magnificent impact on their personal and professional lives, they bounced back and took control of their career. These individuals successfully demonstrated that they develop career resilience after a career crisis.

Last but not least, the findings of this study revealed that participants developed career adaptability once they went through the career change. Savickas and Porfeli (2012) determined career adaptability as “a psychosocial construct that denotes an individual’s resources for coping with current and anticipated tasks, transitions, traumas in their occupational roles that, to some degree large or small, alter their social integration” (p. 662). Throughout the career change journey, participants demonstrated that they developed a skill-set to self-assess situations caused by a critical event, engage in self-learning and development, and become willing to solve unprecedented and new occurring problems on the way of their career. The literature of career psychology has pointed out four dimensions of career adaptability as a concern, control, curiosity, and confidence as a cycle that individuals apply to strategies for complex changes regarding their occupational development (Savickas & Porfeli, 2012; Sullivan & Sheffrin, 2003). These participants illustrated that they utilized adaptability resources, including concern, control, curiosity, and confidence, to deal with new citations occurring in their career trajectory to adapt to new situations and construct a thriving career in a changing environment.

5.3.2 Transformation of Perspectives

The finding of the learning experience of immigrants during a career change in Canada revealed that they went through four major steps of transformation while exploring and preparing themselves for a new career. As I mentioned in table 2.1, Merriam, Caffarella, and Baumgartner (2007) classified ten steps of Mezirow's transformative learning theory into four major categories. These categories are experience, critical reflection, reflective discourses, and critical actions. Following an experience in the Alberta economy, all participants of this study experienced these categories.

The learning experience of all participants was ignited by a disorienting dilemma caused by the Alberta recession in 2014. Mezirow (1990) indicated that "anomalies and dilemmas of which old ways of knowing cannot make sense become catalysts or trigger events that precipitate critical reflection and transformations" (p. 14). As I mentioned in the section on trigger events, participants experienced crucial changes in their workplace, career, or environment, which led them toward a pivotal shift in their personal and professional lives. However, the sequence of following subsequent actions triggered by the event may not occur in the order of steps of the transformative learning model.

The finding of this research indicates that the significant factor that led participants toward a transformative learning experience is their critical reflection on their assumptions, perspectives, values, and attitudes. Mezirow (1985) considered learning about how to do a task of an experience as a meaning for instrumental learning. Similarly, Kagan (2009) distinguished between informational learning and transformative learning, in which informational learning is concerned with changes in what we know, and transformative learning is concerned with how we know. Individuals may add to their knowledge by learning new concepts, indicating informal

learning or instrumental learning. Once they practice critical reflection, they begin to ask questions about their assumptions and beliefs and transform them toward a new meaning (Mezirow 1991). The Focus of this study is only on the transformative learning of participants because of critical reflection and reflective discourses during their career change.

Participants self-examined the feelings and assumptions about their professional life and a career they have built so far in Canada. Before the disjuncture event of their career, they established a long-lasting career and developed a perception that this would be a life-long career. However, facing uncertainty in the economy's future and its impact on their career led them to examine whether growing only in one career for the rest of their lives is a wise decision. These individuals unsuccessfully sought employment for a while in the oil and gas industry in the hope of securing a sustainable job. Whether they were laid off or employed in an unstable situation, they could not find a job due to a tight job market with a significantly high number of job seekers. This situation caused many participants to assess their perception and values toward a career.

Participants like Ehsan and Emilie significantly changed their perception of a desirable career after the trigger events and consequences. They revisited why they chose their career in the first place and what values they have toward a career. They realized that they have a passion for a different career that they never imagined themselves doing. After their realization, they became open-minded to the possibilities that helped them step into that career. Indeed, these participants critically changed their perspective of what they wanted from a career and acted on their new perspective. Further, few participants, including Maira, Horia, and Sibel, also recognized that they looked for different values and principles in a career rather than what they had once the Alberta economy worsened their workplace situation.

Critical reflection was also part of an individual's journey while they were exploring career opportunities. As Mezirow (2000) indicated in its ten steps transformative learning model, individuals' exploration of new opportunities could lead to critical reflection and reflective actions. While they were simply gathering information about new opportunities, they came across a possible career that they never knew was even possible for them to do. Their exploration reshaped their set of assumptions about a career and followed a new pathway due to their inquiry.

Participants critically assessed their assumptions to optimize their learning process and outcome by deciding what, how, and where knowledge and skills are acquired. Most participants developed a career in oil and gas in which learning and development were presumed to be employers' responsibility. Once they were situated in a condition that they realized learning new skills and knowledge is inevitable, they revisited how they used to learn. Most participants re-evaluated their perspective and values toward the impact of learning on their career and how it increases their autonomy in career development.

This study also revealed that reflective discourses accelerated participants' critical reflection throughout their career change. According to Mezirow (2000), discourse is "a dialogue devoted to searching for a common understanding and assessment of the justification of an interpretation or belief" (p. 10). Individuals get involved in conversations to validate their interpretation and new meanings. Participants of this study reached out to individuals within their personal and professional network to examine their developing perspectives, values, and beliefs with their frame of reference and reduce their possible biases. These critical conversations occurred for participants in various stages of a career change. Whether it took place at the beginning of their exploration or along the way of gaining knowledge, or once they were at the

beginning of a new career, participants utilized reflective conversations to rethink their new standpoint toward a new career and construct a personalized meaning from those conversations.

Following critical reflection and reflective discourses, participants took actions aligned with the last three steps of Mezirow's transformative learning model. These actions were trying new roles, building competence and self-confidence, and integrating into a new career while they hold new perspectives. As I mentioned before, steps of transformative learning mostly do not occur in an exact sequence as defined. These actions of participants also occurred on multiple occasions following their reflection and reflective discourses.

To conclude, the findings of this study revealed that skilled immigrants of this study experienced transformative learning on various occasions throughout the journey of a career change. Ignited by trigger events, participants critically examined their assumptions, values, and attitudes. As a result, they constructed new meanings by engaging in self-reflection and reflective discourses with individuals in their personal and professional networks. Consequently, these newly constructed meanings empowered them to become open-minded, flexible, and adaptable to changes and planned a new set of actions to address challenges of integrating into a new career.

5.4 Barriers toward Career Change of Skilled Immigrants

The findings of this study revealed that skilled immigrants experienced unique challenges toward a career change due to being immigrants in Canada. Barriers admitted by participants are Canadian culture of networking, language and communication skills, immigrants' financial insecurity, admission requirements imposed by Canadian institutions, and limited time of previous career establishment.

Several studies demonstrated that a lack of professional networks could impact the employability of skilled immigrants in Canada (Csedo, 2008; Ryan, 2011; Shuva, 2021). Although most skilled immigrants initiated a professional network through their previous careers in the few years, they were in Canada, constructing a new network in a new field appeared challenging again. Skilled immigrants who landed in Canada less than ten years had few years to develop networking skills and construct professional networks and ties in various social locations. In contrast, they had to overcome other settlement and integration challenges in Canada. Additionally, their focus on building a professional network was in the field of their expertise. Compared with Canadian-born individuals who establish and expand their network and develop their careers, skilled immigrants did not have enough time and skills to expand their network with individuals outside their profession.

In addition to networking skills, language and communication skills are other challenges that could impact the employability of skilled immigrants in Canada (Girard, 2010; Guo 2013a). Although skilled immigrants developed language and communication skills through their first career in Canada, learning and developing language and communication skills while entering a new field of study and profession became an emerging challenge. To establish their new career, skilled immigrants are required to learn new technical terms and an effective way of interacting with others in new social settings. While participants' previous work experience heavily relied on their technical skills, many of them admitted that stepping foot in a new industry required soft skills that heavily relied on expertise in communication skills. Participants also reported these challenges that impacted their self-confidence to start a new career in a new field and took the extra time to develop these skills along with other skill development required.

Moreover, financial insecurity resulting from the Alberta recession became a significant career change challenge for skilled immigrants. While this factor could negatively impact all individuals, Alberta recessions significantly hit skilled immigrants. Due to settlement and integration barriers toward employment in Canada, skilled immigrants have already gone through a couple of years of unemployment before their first professional job in Canada. Therefore, they were forced to spend the savings they brought to Canada until they found a job. Additionally, because skilled immigrants landed less than ten years in Canada, they did not have enough time to preserve adequate savings for short-term unemployment periods. Hence, financial security-constrained participants to limit decisions conserving their learning budget and time after a career change.

Besides the financial insecurity, few participants admitted that the admission requirement for formal education in most Canadian institutions was a setback toward their career change. Skilled immigrants who never acquired a post-secondary degree in Canada require submitting a language test result, such as IELTS or TOEFL, which are expensive and lengthy to acquire. Although these participants lived and worked in Canada for a few years, they still had to provide language proficiency tests to start formal education. Additionally, skilled immigrants require providing documents through a complex process from the previous education institution that they completed their degree. While Canadian educational institutions have established communication channels to transfer the credential of individuals, this process could become complex once it comes to the institution outside Canada. Several participants admitted that since their prospective universities did not have a communication channel with their previous universities, they were challenged to try different ways to obtain required documents for admission. To avoid these

lengthy and expensive challenges, several participants decided only to consider training programs with fewer admission requirements.

Last but not least, limited time for developing a career in Canada was a concern of skilled immigrants. Settlement and integration of skilled immigrants interrupted the career trajectory of these individuals for a few years before establishing a new career in Canada. Therefore, participants felt the pressure of having limited time to explore their options for a new career and settle with a new one to avoid more time lost in their career life span.

5.5 Overall Conclusion

The objective of this study was to explore the self-directed learning experience of skilled immigrants in Canada who successfully changed their career to a desirable industry after a crisis event in their career. For this study, I interviewed and arranged focus group sessions with twelve skilled immigrants who landed between 5 and 10 years ago in Alberta and worked in their profession for a minimum of one year in Canada. The result of this study focused on four major findings: a) critical events that could trigger a career change, b) factors that contributed to career change, c) the learning patterns toward a career change, d) barriers of skilled immigrants toward a career change.

The findings confirm that a critical event initiated a career change of skilled immigrants in Alberta. These skilled immigrants had their jobs negatively impacted by the Alberta recession in 2014-2015. After a period of unemployment or abrupt changes that affected their employment situation, skilled immigrants were triggered to pivot their careers toward more sustainable career choices. Unfavorable changes in the workplace culture, unemployment, unstable employment, significant decrease in working hours, and uncertain future of employment are a few critical

events caused by a disruption in Alberta's economy. These trigger events are aligned with the definition of disjuncture in adult learning literature that could ignite an urge for new learnings (Jarvis, 2006; Mezirow, 1991).

This study demonstrates that skilled immigrants' pivotal move after the disjuncture event was driven by intrinsic, extrinsic motivation. Moreover, the need for competence, autonomy, and relatedness attributed to their professional lives also led participants to explore new career choices and plan to learn new skills and knowledge in a new area. Once the Alberta recession adversely impacted the future of individuals' careers, skilled immigrants experienced a lack of autonomy, competence, and relatedness in their professional lives. They began exploring a job that could fulfill these three physiological needs. Additionally, this study revealed that few participants initiated their career change with a passion or interest in a specific field, indicating their intrinsic motivation to make a pivotal move. Moreover, financial constraints were reported by participants as an extrinsic motivation toward a career change.

Additionally, this research revealed that skilled immigrants experienced self-directed learning and transformative learning once they sought to acquire new skills and knowledge during the process of a career change. Transformative learning of participants occurred through self-assessment, critical self-reflection, reflective discourses with their network, and followed by critical action toward a career change. Throughout this transition journey, skilled immigrants' perspectives, assumptions, values, and attitudes toward their professional and personal lives significantly transformed. These types of transformation ignited by critical reflection empowered skilled immigrants to critically assess the future of their previous career, their current knowledge and skills, and plan for a critical change to acquire a new and successful career. Moreover, this study revealed that skilled immigrants specifically transformed their perspective toward career

development which led them to take control of their career development in a new career and actively plan for their learning and development.

In addition to transformative learning, the findings indicated that skilled immigrants utilized self-learning practice to acquire new knowledge and skills required for a new career. Participants monitored the learning process by applying two self-management and self-monitoring strategies outlined as two cognitive and metacognitive aspects of self-directed learning. By self-managing the process of learning, participants monitored the process of what, how, and where they had to acquire knowledge and skills required for a new career. They also observed the process and outcome by managing their time, setting practical goals, and conducting self-reflection on their learning progress. The findings revealed that participants developed the skills attributed to self-directing their learning during a career change.

Furthermore, the findings of this study disclosed that skilled immigrants developed positive traits that are attributed to self-directed learner. Driven by motivations ignited by critical events, participants developed cognitive and metacognitive skills that empowered them to become self-directed learners in distinguishing required skills and effectively acquiring them. Participants' demonstrated skills are taking responsibility for learning, self-confidence, openness, flexibility, dealing with ambiguity, resilience, and adaptability to change. Additionally, participants indicated that these developed skills became transferable skills in the context of new careers and empowered them to adopt a positive perspective toward career development through a possible future crisis. Indeed, the transformation of their perspective because of career change prepared them to become aware of their capabilities, become open-minded to new opportunities, look at new pathways, and get ideas from the point of view of others.

Finally, the results demonstrated that skilled immigrants encountered specific challenges that occurred to them because of being immigrants in Canada. These challenges and barriers are professional networking in Canadian culture, language and communication skills, immigrants' financial insecurity, admission requirements imposed by Canadian institutions, and limited time of previous career establishment. These challenges have forced immigrants to spend more time and resources to acquire new skills and knowledge than an average Canadian-born who may go through a career change.

5.6 Research Implication

5.6.1 Implication of Current Study

This study adds to the understanding of how skilled immigrants conduct a successful career change at the time of a critical event in their professional lives through the process of self-learning and transformative learning. This study demonstrates that skilled immigrants have specific challenges toward their career change due to being immigrants, which may take extra learning and effort to succeed in a career change.

Skilled immigrants of Canada have an essential role in the growth and success of the Canadian economy in a global market. Therefore, provincial and federal governments should consider providing resources and implementing policies that accelerate the career change of skilled immigrants toward new industries. While most settlement programs are offered to new immigrants in Canada, there is still a lack of support for immigrants who have already established a career in Canada but must pivot due to the economic crisis. To achieve this, local governments, non-profit organizations, and service providers should offer programs that could help skilled and experienced immigrants overcome specific barriers they encounter and facilitate

their transition. For example, a mentoring program that advocates for a career change and links the community of skilled immigrants could be helpful. Moreover, funded programs that assist immigrants with learning effective business communication would be a great asset toward their transition. Furthermore, promoting self-reflection and critical reflection could significantly support skilled immigrants. Skilled immigrants could benefit from practicing self-reflection through programs designed based on these contexts to develop these skills to initiate transformative and self-directed learning toward new possibilities.

Additionally, this study offers ideas for the professional and personal development of individuals who work in a changing workplace. The advancement of technology, along with its critical impacts on the structure of organizations, enforces unprecedented changes in the tasks and responsibilities of individuals. Consequently, many jobs and tasks are vanishing while new ones are emerging through various industries. In these ever-changing situations, workers need to become adaptive to new environments. This study provides a notion of adaptability and skills requirement for skilled immigrants to be resilient and flexible to abrupt changes in the economy.

Finally, since one of the constraints of skilled immigrants was the admission requirement to start a formal education for a career change, educational institutions should consider alternative requirements for admitting skilled immigrants who already have professionally worked in Canada. Providing alternative requirements instead of language requirements or transcripts from an international institution could ease the process of seeking formal education for experienced and skilled immigrants.

5.6.2 Implication for Future Studies

This study offers several possible areas that could be studied further in future studies. First of all, due to the limitations of this study mentioned in chapter three, I could not examine the relationship between self-directed learning and transformative learning of participants. Studying this possible relationship through a methodology exploring how participants' transformed perspective could trigger more self-learning of skilled immigrants would be informative. Many participants developed self-directed learning skills once their perspective toward career development transformed. Therefore, a further study could help understand whether facilitation of one mode of learning may accelerate the other.

Additionally, future studies could consider exploring the practice of a career change by applying inclusive career intervention of service providers. Examination of these interventions could inform the study more in-depth about how facilitation of critical reflection, reflective discourse, and our designed self-directed learning practices could facilitate the process of transformative learning and self-directed learning involved in a career change.

Moreover, future studies could also explore the career change of skilled immigrants through the perspective of other individuals involved in the lives of these immigrants. I believe insights from individuals such as workplace colleagues, educators in various settings, service providers for immigrants, or family members could provide more depth toward transformation and changes happening post-career change of skilled immigrants.

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Appendix A: Recruitment Poster

Are you a skilled immigrant who has made a successful career change recently?



Photo source: <https://www.entrepreneur.com/article/304828>

Do you want to share your success story of how you learned to learn in order to help other immigrants who are still struggling with their careers in unstable industries?

I am an MA student at the University of Calgary and I am conducting research for my master's thesis on the learning experience of skilled immigrants that occurred during their successful career change to a desirable industry. This study focuses on the career change of skilled immigrants due to unemployment or uncertainty caused by digital transformation and business restructuring in organizations specifically in the Alberta economy. If

- you are a skilled immigrant (1-hold a minimum bachelor's degree from a foreign post-secondary institution, 2- have a minimum of one year of continuous work in a managerial, technical, or a professional job outside Canada)
- have shifted your career toward a new industry of your choice recently
- have lived in Canada in the last 5 to 10 years?
- have work experience in your country of origin before you landed in Canada
- worked in Alberta in your previous area of expertise before your career change

I would like to hear from you. Your participation will take place over one interview and one focus group.

This study has been approved by the University of Calgary Conjoint Faculties Research Ethics Board (REB20-0735).



Appendix B: Consent Form for Interview



Name of Researcher, Faculty, Department, Telephone & Email:

Vida Barjesteh, MA student in Educational Research, Adult Learning Specialization, Werklund School of Education,

Supervisor:

Dr. Shibao Guo, Professor in Adult Learning, Werklund School of Education

Title of Project:

Career Change of Skilled Immigrants in Canada: A Qualitative Case Study of Immigrants Career Change and Self-Directed Learning

Sponsor:

Unfunded

This consent form, a copy of which has been given to you, is only part of the process of informed consent. If you want more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

The University of Calgary Conjoint Faculties Research Ethics Board has approved this research study. Participation is completely voluntary, and confidential.

Purpose of the Study

This study will explore the learning experience of skilled immigrants that occurred during a successful career change to a desirable industry. This study focuses on the career change of skilled immigrants due to unemployment uncertainty caused by digital transformation and business restructuring in organizations. I will explore how these skilled immigrants learned how to learn and embraced uncertainty and abrupt changes in Alberta's economy and successfully shifted their careers to a new industry of their choice.

What Will I Be Asked To Do?

As a participant of this study you will be asked to participate in an interview that will likely take about 60-90minutes. Due to the ongoing Covid-19 pandemic, one-on-one interview will be organized virtually throughout a licensed Zoom domain. The time of interview will be coordinated with you to accommodate your schedule. You will be asked questions about your past experience connected to your learning

experience occurred during your career change. This interview will be a conversation with open-ended questions about your motives, attitudes, values, perspectives and self-managing of learning during your career change and you self-reflect on your own experience.

For the purpose of further data analysis, our interview conversation will be recorded audibly and later will be transcribed. Your identity will remain anonymous by selecting a pseudonym of your choice.

Please note that participation in this study is completely voluntary and you may refuse to participate altogether, may refuse to participate in parts of the study, may decline to answer any and all questions, and may withdraw from the study at any time without penalty.

What Type of Personal Information Will Be Collected?

Only I, as the researcher, will collect your name, phone number, and email address for the purpose of communication and filing of consent letters. During interview and rest of the research, you will be referred to a chosen pseudonym. The audio recording of interview will never be shared publicly. All the information including this consent letter that contain your name, email address, or your phone number will be stored digitally on a private personal computer that is password protected. Other than this identifying information, you will be asked to provide your age, education and profession that may be used for the research purpose that is only linked to your pseudonym chosen name.

Please note that your direct quotes from the interview conversation may be included in final research report. For the purpose of confidentiality, any identifying information will be removed from the final writing.

I wish to remain anonymous, but you may refer to me by a pseudonym: Yes: ___ No: ___

The pseudonym I choose for myself is: _____

Are there Risks or Benefits if I Participat

There are limited possible risks associated with your participation in this study. It is possible that questions or discussions may be distress you during the conversation. If you feel any question of interview may make you uncomfortable or you feel distressed, you have the right not to answer or you can inform me to move on to the next question, take a break, or stop the interview. Additionally, on the final pages of this consent form, there is contact information for low or no cost resources that are available to reach out and get support.

Your participation may have some potential benefit for you. By participating in conversation, you have the opportunity to self-reflect on your learning outcome of your career change and explore more about yourself and personal and professional learning. Indeed, throughout our conversation and your self-reflection, you may realize about skill-sets that you have tacitly developed throughout your career change journey.

What Happens to the Information I Provide?

I will conduct the interview using Zoom, accessed through a password-protected university account. Zoom has high level security precautions built in so your confidentiality is protected. I will record interview using the Zoom and will upload and store on a password-protected computer without any personal identifiers.

For the purpose of your confidentiality, your name and your contact information are only accessible to me. Raw data of interview will only be accessible to me, as the researcher, and my supervisor. Raw data will not be shared publicly. I will transcribe and analyze raw data and present the result in my final master's report.

I will keep the electronic data on my personal computer and extra hard drive that are both password-protected. Any notes on hard copies will be kept in a locked filing cabinet that I only have access to. For the purpose of the research integrity, the anonymous data will be stored securely for five years on my personal computer, at which time, it will be permanently erased.

Your participation in this study is voluntary, anonymous, and confidential. You are free to withdraw from the research until one week after data collection is completed. If you wish to do so, you can simply inform the researcher and your collected data will be destroyed and removed from the research without any penalty or consequences. Please note that withdrawal is no longer possible one week after data collection is completed.

Signatures

Your signature on this form indicates that 1) you understand to your satisfaction the information provided to you about your participation in this research project, and 2) you agree to participate in the research project.

In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from this research project at any time. You should feel free to ask for clarification or new information throughout your participation.

Participant's Name: (please print) _____

Participant's Signature: _____ Date: _____

Researcher's Name: (please print) _____

Researcher's Signature: _____ Date: _____

Questions/Concerns

If you have any further questions or want clarification regarding this research and/or your participation, please contact: If you have any concerns about the way you've been treated as a participant, please contact the Research Ethics Analyst, Research Services Office, University of Calgary at 403.220.6289 or 403.220.8640; email cfreb@ucalgary.ca. A copy of this consent form has been given to you to keep for your records and reference. The investigator has kept a copy of the consent form.

Community Mental Health Support Resources

Distress Centre Calgary

24-hour crisis line

Contact Phone Number: 403.266.4357

www.distresscentre.com/

From the website:

Distress Centre Calgary (DCC) has provided 24-hour crisis support in Calgary and southern Alberta since 1970. We do this through our 24-hour crisis line, email and daily chat and daily text for our youth. We also have professional counselling for clients with issues that can't be resolved over the phone. For people needing information on community, social, and health services we have 24-hour support on our 211 line. All our services are free. We do not define crisis. We do not judge.

Anyone can call us day or night.

EastSide Family Centre

Free walk-in single session counselling

Contact Phone Number: 403.299.9699

<https://www.woodshomes.ca/>

From the website:

The Eastside Family Centre has proudly been serving the Calgary community since 1990. We provide no-charge, walk-in, single-session counselling to individuals, couples and families. No appointment is necessary. These services are for people experiencing emotional upset that may arise from a variety of situations ranging from parent/adolescent conflict and mental health concerns to domestic violence, financial stress and/or employment loss. Multi-disciplinary teams of professionals, including psychiatric and clinical consultation, are available.

Calgary Counselling Centre

Counselling services with fees on a sliding scale

Contact Phone Number: 833.827.4229

www.calgarycounselling.com

From the website:

Calgary Counselling Centre is a charitable organization committed to providing compassionate, professional, and affordable counselling services to Calgarians. Through counselling and group programs, the Centre helps individuals, couples, parents, families, and youth resolve emotional and social problems. Through its ongoing research and education programs, Calgary Counselling Centre strives to meet the changing needs of our community.

Catholic Family Services

Pay-what-you-can counselling services (serves all faiths)

Contact Phone Number: 403.205.5294

www.cfs-ab.org

From the website:

There are times in everyone's life when a little extra support is needed. Catholic Family Service (CFS) helps people deal with a full range of life events from coping with daily pressures – like job loss or relationship problems – to addressing mental health issues and breaking intergenerational cycles of abuse. If you are feeling confused, overwhelmed or uncertain, we can help you. Our counselling services are for individuals, couples and families. We work from a

variety of research and trauma informed approaches, and always holds ourselves accountable to you and to your feedback.

Jewish Family Services Calgary

Counselling services with fees on a sliding scale (serves all faiths)

Contact Phone Number: 403.287.3510

www.jfsc.org

From the website:

Jewish Family Service Calgary has a team of professional, qualified counsellors. We provide a variety of services including individual, couples, child, and family therapy as well as group work. Our counsellors utilize a variety of theoretical approaches in their work, including: strength based, cognitive-behavioural, systemic therapy, body focused, and play therapy. We have a holistic, client centered approach to counselling; viewing the client in their environment and recognizing the importance of balance among cognitive, emotional, spiritual, social, and physical aspects of self.

Immigrants Services Calgary

Counselling services with low or no fees on a sliding scale

Contact Phone Number: 403.265.1120

www.immigrantservicescalgary.ca/our-services/family-support-counselling/psychotherapy-counselling-services

From website:

This program provides professional counselling to immigrants and refugees. Services are available for individuals, couples and families who are struggling with different kinds of issues, including (but not limited to):

Anger management
Anxiety
Depression
Life transitions
Loss and grief
Parenting issues
Self-esteem
Marital conflicts
and other concerns

Appendix C: Consent Form for Focus Group



Name of Researcher, Faculty, Department, Telephone & Email:

Vida Barjesteh, MA student in Educational Research, Adult Learning Specialization, Werklund School of Education,

Supervisor:

Dr. Shibao Guo, Professor in Adult Learning, Werklund School of Education

Title of Project:

Career Change of Skilled Immigrants in Canada: A Qualitative Case Study of Immigrants Career Change and Self-Directed Learning

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This study will explore the learning experience of skilled immigrants that occurred during a successful career change to a desirable industry. This study focuses on the career change of skilled immigrants due to unemployment uncertainty caused by digital transformation and business restructuring in organizations. I will explore how these skilled immigrants learned how to learn and embraced uncertainty and abrupt changes in Alberta's economy and successfully shifted their careers to a new industry of their choice.

What Will I Be Asked To Do?

As a participant of this study you will be asked to participate in a focus group that will likely take about 60-90minutes. Due to the ongoing Covid-19 pandemic, focus group will be organized virtually throughout a licensed Zoom domain. The focus group time will be coordinated with you to accommodate your schedule. You will be asked questions about your past experience connected to your learning experience occurred during your career change. You will engage in conversation with other participants

and reflect on your motives, attitudes, values, perspectives and self-managing of learning during your career change.

For the purpose of further data analysis, focus group conversation will be recorded audibly and later will be transcribed. Your identity will remain anonymous by selecting a pseudonym of your choice.

Please note that participation in this study is completely voluntary and you may refuse to participate altogether, may refuse to participate in parts of the study, may decline to answer any and all questions, and may withdraw from the study at any time without penalty.

What Type of Personal Information Will Be Collected?

Only I, as the researcher, will collect your name, phone number, and email address for the purpose of communication and filing of consent letters. During the focus group and rest of the research, you will be referred to a chosen pseudonym. The audio recording of focus group will never be shared publicly. All the information including this consent letter that contain your name, email address, or your phone number will be stored digitally on a private personal computer that is password protected. Other than this identifying information, you will be asked to provide your age, education and profession that may be used for the research purpose that is only linked to your pseudonym chosen name.

Please note that your direct quotes from the focus group conversation may be included in final research report. For the purpose of confidentiality, any identifying information will be removed from the final writing.

I wish to remain anonymous, but you may refer to me by a pseudonym:

Yes: ___ No: ___

The pseudonym I choose for myself is: _____

Are there Risks or Benefits if I Participate?

There are limited possible risks associated with your participation in this study. It is possible that questions or discussions may be distress you during the conversation. If you feel any question of focus group may make you uncomfortable or you feel distressed, you have the right not to answer or you can inform me to move on to the next question. Additionally, on the final pages of this consent form, there is contact information for low or no cost resources that are available to reach out and get support.

Your participation may have some potential benefit for you. By participating in conversation with other skilled immigrants, you have the opportunity to self-reflect on your learning outcome of your career change and explore more about yourself and personal and professional learning. Indeed, by hearing perspectives of other skilled immigrants and engaging in conversation, you may realize about skill-sets that you have tacitly developed throughout your career change journey.

What Happens to the Information I Provide

I will conduct the focus group using Zoom, accessed through a password-protected university account. Zoom has high level security precautions built in so your confidentiality is protected. I will record interview using the Zoom and will upload and store on a password-protected computer without any personal identifiers.

For the purpose of your confidentiality, your name and your contact information are only accessible to me. Raw data of focus group will only be accessible to me, as the researcher, and my supervisor. Raw data will not be shared publicly. I will transcribe and analyze raw data and present the result in my final master's report.

I will keep the electronic data on my personal computer and extra hard drive that are both password-protected. Any notes on hard copies will be kept in a locked filing cabinet that I only have access to. For the purpose of the research integrity, the anonymous data will be stored securely for five years on my personal computer, at which time, it will be permanently erased.

Your participation in this study is voluntary, anonymous, and confidential. You are free to withdraw from the research prior to focus group session. If you wish to do so, you can simply inform the researcher and withdraw without any penalty or consequences. Please note that due to the nature of focus group, your Focus group data cannot be withdrawn after the focus group session is complete.

Should you choose to participate, you will be asked to respect the privacy of other focus group members by not disclosing any content discussed during the study. Please note that while all participants will be requested to maintain the confidentiality of other members of the focus group, complete confidentiality cannot be guaranteed.

Signatures

Your signature on this form indicates that 1) you understand to your satisfaction the information provided to you about your participation in this research project, and 2) you agree to participate in the research project.

In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from this research project at any time. You should feel free to ask for clarification or new information throughout your participation.

Participant's Name: (please print) _____

Participant's Signature: _____ Date: _____

Researcher's Name: (please print) _____

Researcher's Signature: _____ Date: _____

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- Anger management
- Anxiety
- Depression
- Life transitions
- Loss and grief
- Parenting issues
- Self-esteem
- Marital conflicts
- and other concerns

Appendix D: Interview Guide

Interview Guide

Background information

- **Please tell me about yourself and your career in your country and here in Canada.**
 - 1- When did you immigrate to Canada? How long have you been in Alberta? Why did you select Alberta to live and work?
 - 2- Can you tell me about your education and work experience in your home country and here in Canada?
 - 3- Can you elaborate on your previous career condition and its market demand? How about your new career? How is the trend and condition of the new career?

Trigger events and challenges

- **Tell me about the time that you decided to change your career.**
 - 1- Tell me about the time that career change happened, how do you describe your first days in your new career? How were last days at your previous career? How do you compare these days?
 - 2- What barriers you encountered in your career change because of uncertainty in the economy of Alberta?
 - 3- What do you think about the idea of triggered events or a meaningful event that initiated your career change?
 - 4- Do you think you experienced any pivotal moment that led you to the decision of career change?
 - 5- How would you describe your feeling about facing uncertainty and trying to learn new skills and heading for a new career?

Motivations of learning

- **I would like to hear about the time when your decision about career transition and learning for a new career ignited**
 - 1- What do you think was your motivation to change your career? Was it negative or positive driving force?
 - 2- How do you think your motivation grow during your exploration of career?
 - 3- Sometimes people are a great influence for us. Tell me about people or situations that you think motivated you to explore the probability of career change?
 - 4- How did you explore the options you had for career change?

5- How do you think your interest emerged for a new career?

Learning strategies

- **Tell me about your learning strategy once you identify skill/knowledge gap.**
 - 1- Now that your career change is completed, how do you develop your knowledge and approach learning new skills in your current career?
 - 2- During your career change and exploration of new ideas, how did you identify resources for learning?
 - 3- How did you assess your learning needs?
 - 4- How do you feel about your self-confidence in the process of learning? How was before and after your career change?
 - 5- What do you think about whether you learned how to learn during your career change?
 - 6- Can you reflect on what you learned during your career change?
 - 7- How did you set goals and planned for your learning? How do you see yourself in self-management in terms of your learning? How do you describe changes in your learning? Do you think the way you learn is different now?

Changes in your frame of reference

- **As you think about your career transition, I would like to know what career means to you and how you see the relationship between learning and career development.**
 - 1- How is career change in your country? How different it was here? How do you see career change now?
 - 2- What is your perspective toward career development? What was your perspective toward career development before you decide for a career change?
 - 3- Tell me about the perspective you had about learning new skills before career change. How is your perspective about it now? Tell me about perspective of others around you about learning new skills.
 - 4- Do you think career change impacted the way you learn? How? Do you consider you learned how to learn?
 - 5- Tell me whether the career change impacted your idea about having control over your career and how you learn.
 - 6- If there is a situation for a new career change, do you think you are ready for another one?