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FACTORS AFFECTING THE ONLINE LEARNING EXPERIENCES OF FRONTLINE COMMUNITY SERVICE WORKERS IN ALBERTA

BY

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Dedication

Eunoia. A word with an unreasonable number of vowels, and one especially fitting for a doctoral journey. It means beautiful thinking: the quiet beauty of understanding something deeply and honestly. Beautiful thinking is cultivated by the company we keep, by the beautiful thinkers who cheer us on through our most formidable endeavours.

To my husband, thank you for your love. You lived this dissertation alongside me, and I love you more. To my children, thank you for being my joy, my grounding, and my greatest reason. To my parents, thank you for nurturing in me a love of learning long before this dissertation began. I indelibly perserved because of your love and unwavering guidance.

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To Cohort 10, cheers to friendship, collective brilliance, and Ireland. Nan, you remain part of this story. You are remembered with love.

To my closet friends and indinitable family. I may have composed the melody and lyrics of thesis. However, your beautiful souls imbued the resonance, texture, and lyrical beauty within myself that eleqaintly radiates within this disertation.

To those we love and those we remember. This is my contribution/legacy towards my lineage. May it continue to grow abundant fields of Roses and Heathers. ***Eunoia.***

Abstract

The training and education of frontline workers in Alberta's Persons with Developmental Disabilities sector are critical given the sector's complexity, workforce pressures, and high-risk service environment. This study used a pragmatic mixed-methods exploratory case study design to examine frontline workers' online learning experiences within community-based service-providing agencies in Alberta's PDD sector. Guided by Lewin's Force Field Analysis, data from 103 frontline workers were used to identify the micro-, meso-, and macro-level factors shape online learning under real-world workforce conditions. The findings show that online learning experiences were shaped not by technology alone, nor by individual motivation in isolation, but by the interaction of structural pressures, organizational conditions, and personal capacity. At the micro level, education, digital confidence, and language proficiency functioned as enabling forces, while mental health strain, disability-related barriers, financial precarity, and workload burden functioned as restraining forces. At the meso level, leadership support, professional development structures, innovation culture, and delivery design influenced whether online learning was experienced as accessible and worthwhile. At the macro level, accreditation, COVID-19, funding pressures, and increasing caseload complexity shaped the broader conditions within which learning occurred. This study extends Force Field Analysis by showing that these forces interact across the field of frontline workers' online learning experiences. It also identifies a solution–burden paradox in which online learning can function as both enabling and constraining depending on surrounding conditions. Overall, the study offers an evidence-based foundation for policy, practice, and future research.

Keywords: Frontline community service workers, persons with developmental disability sector, force field analysis, pragmatic, exploratory, mixed methods, case study, online learning

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List of Acronyms

COVID-19	Coronavirus SARS-CoV-2 Disease
FFA	Force Field Analysis
FLW	Front Line Worker
IAS	Individuals Accessing Services
PDD	Persons with Developmental Disabilities

Definition of Terms

Community Service Workers/ Community Service Practitioners/Community-Level Worker: A non-clinical support worker who may assist with a range of practical tasks to support individuals to participate in community activities, provide social and emotional help, and maintain physical health." (Shepherd & Meehan, 2019). Classified within Canada's National Occupational Code (NOC) as 41212 and an unregulated occupation (Government of Canada, 2018).

Complex Needs: Persons with developmental disabilities who also demonstrate complex behaviours, dual diagnosis, and those who are medically fragile (Alberta Council of Disability Services, 2020a).

Community and Social Services: In Alberta, the Ministry of Community and Social Services leads income, employment, disability, and community-based supports, including family violence prevention and family and community support (Government of Alberta, 2021).

Coronavirus Disease: A global pandemic caused by the coronavirus SARS-CoV-2, dispersed worldwide, causing devastating societal and consequences (Stenseth et al., 2021).

Direct-Care Worker: A globally used definition for community-level health workers that describes them as individuals who hold multiple roles in care delivery, including raising awareness, reducing stigma, connecting individuals to resources, ensuring follow-up, and consulting with various government departments (Raghavan et al., 2021).

Disability Service Workers: Professional staff who provide direct care and support to persons with an intellectual disability (Ryan et al., 2019).

Force Field Analysis: Developed by Lewin (1947) Force field analysis (FFA) aims to enhance change management by generating a tactical approach to identify the driving forces that will support the change, as well as the restraining forces that will inhibit it. (Mak & Chang, 2019).

Frontline Workers (FLWs): A frontline worker is an amalgamated occupational title for frontline workers or direct service workers in aging, physical disability, mental health, or intellectual and developmental disability services (Hewitt et al., 2008). Within this research, frontline workers are entry-level and more experienced in direct-support positions in the PDD sector in Alberta (Alberta Council of Disability Services, 2020a).

Individuals Accessing Services: This research uses the term individuals accessing services (IAS) to refer to persons with developmental disabilities who are supported by service-providing agencies. Although the term "client" can be found within the research literature and practice, this research supports a self-advocacy and person-centred approach to services that honours equality, independence, and choice within the PDD community (Self Advocacy Federation, n.d.).

Online/Distance Education/E-learning: Electronically facilitated asynchronous and synchronous exchanges for thinking and learning collaboratively. Learning opportunities that connect individuals at a distance through technological platforms such as the internet and related communication technologies, thereby creating virtual educational communities. The goal of online/distance/e-learning is to collaboratively engage in discourse and reflection to build personal significance and reinforce mutual knowledge. For this research, online learning is used to describe the educational approach through communication technologies that build and sustain learning for frontline workers within Alberta's PDD sector (Garrison, 2016).

Persons with Developmental Disabilities (PDD): A manner of functioning that commenced in childhood and results in significant limitation in both intellectual capacity and adaptive skills (Government of Alberta, 2012).

Service Providers/Service Providing Agencies: In Alberta, the Persons with Developmental Disabilities (PDD) program funds community service providers to help adults with developmental disabilities live as independently as possible in their communities (Government of Alberta, 2020b).

Unregulated Occupation: An unregulated occupation is not restricted under provincial regulations (Tufts, 2010).

ONLINE LEARNING EXPERIENCES OF COMMUNITY SERVICE WORKERS

This study examined the online learning experiences of frontline workers (FLWs) in Alberta's Persons with Developmental Disabilities (PDD) sector. In this context, online learning emerged as a cost-effective strategy for addressing workforce skills shortages and became increasingly prominent following the onset of the Coronavirus disease (COVID-19) pandemic. Its adoption within the PDD sector appeared to be driven largely by external pressures. Faced with ongoing workforce shortages, service providers hired frontline workers who often lacked the requisite skills, absorbed the substantial costs associated with their education and training, including internal and external trainers, staff wages, accommodations, and travel, and realized limited return on investment due to notoriously high turnover rates. At 30%, turnover in 2023 was the highest recorded in the past 12 years (Alberta Council of Disability Services, 2023).

Service providers had identified a need for online learning solutions even before the pandemic (Alberta Council of Disability Services, 2019). The onset of the Coronavirus disease (COVID-19) further exacerbated skills shortages within the sector. As frontline workers were designated essential, new health and safety protocols had to be taught quickly, compelling many service providers to adopt online learning solutions out of necessity. Yet the economic imperative to develop a skilled workforce must be balanced with careful attention to frontline workers lived experiences and the ways these may influence work performance, health status, and quality of life (Korkmaz et al., 2020; Sousa & Rocha, 2019). Accordingly, employers must address the needs of frontline workers while also embracing the benefits of online learning, such as flexible scheduling and enhanced opportunities for skill development, to respond more effectively to workforce demands within the sector (Schleicher, 2020).

Grounded in a pragmatic theoretical foundation, learners' accounts of their experiences play an important role in shaping learning. While any individual learner's experience cannot be predicted, examining the learning experiences of a group can reveal salient patterns and enable theoretical concepts to emerge that contribute useful and actionable knowledge (Kelly & Cordeiro, 2020).

Evidence suggests that effective online learning in health sciences contexts, such as the PDD sector, depends on careful consideration of both driving and restraining factors, including limited resources such as time, cost, and funding, alongside learning design, institutional strategies, flexibility, access, learning preferences, and approaches to integration (Regmi & Jones, 2020),

Workforce skill shortages within Alberta's Persons with Developmental Disabilities (PDD) sector have compelled service providers to hire employees who do not always possess the skills and experience required to deliver quality outcomes, or to depend on non-frontline staff, such as leaders and administrative personnel, to fill vacant positions while assuming responsibility for in-house training and education (Cummings, 2022).

The high-risk and complex work environment within Alberta's Persons with Developmental Disabilities (PDD) sector drew academic, political, and public attention following the death of Deborah Onwu, a frontline community service worker who was fatally stabbed while working in a Calgary group home (Smith, 2019). In the aftermath, the voice of the workforce emerged through media coverage, emphasizing that frontline workers were underprepared and unsafe within the sector. A solution was urgently needed, yet the challenge appeared formidable (Abel et al., 2013). How could service providers recruit and train an appropriate workforce capable of

achieving quality outcomes while also safeguarding workers in a complex, overburdened, and high-risk environment?

These concerns were underscored by sector-wide pressures. In correspondence to Alberta's Ministry of Community and Social Services dated January 10, 2020, the Calgary Council of Service Providers noted that a "significant increase in complex and ultra-complex needs, along with the current waiting list, are clear challenges" (Calgary Service Provider Council, 2019). Similarly, the Alberta Council of Disability Services (ACDS) estimated that approximately 1,700 individuals, representing 14% of the total PDD caseload, were considered complex or ultra-complex, meaning that individuals accessing services may also present with developmental disabilities alongside histories of chronic substance use, addiction, homelessness, and criminal behaviour (Alberta Council of Disability Services, 2020d). Despite these realities, frontline workers received limited training related to mental health, and little research had examined their role in supporting the mental health needs of individuals accessing services (Konnert et al., 2019).

At the same time, sector dialogue remained notably absent of the workforces' perspective. The 2019 recommendations to Alberta's Ministry of Community and Social Services did not address whether frontline workers felt adequately skilled or safe in their roles, nor how the high-risk work environment affected their well-being (Calgary Service Provider Council, 2019). In 2023, ACDS released an updated set of recommendations emphasizing respectful government relationships, effective financial investment in service delivery, and coordinated strategies to achieve a skilled and sustainable workforce (Alberta Council of Disability Services, 2023). These recommendations were informed by extensive labour market analysis and sector

engagement conducted by KPMG and Blueprint CDS. Yet, once again, support for frontline workers and recognition of how the high-risk environment may affect their well-being were largely absent. This study argued that frontline workers are essential to developing a worker-centred understanding of education and training needs, the role of online learning, and the drivers and restraining factors that shape learning experiences. Their perspectives offer a valuable sector-wide foundation for the development of valid, useful, and reliable online education. Understanding how frontline workers experience learning, and how they want that learning to be structured, is therefore critical (Choy et al., 2013).

The urgency of these issues intensified on March 11, 2020, when the World Health Organization declared COVID-19 a global pandemic (Ghebreyesus, 2020). Alberta's PDD workforce, already under strain, was required to continue operating while implementing additional health and safety precautions. Service providers were left scrambling to deliver new training and protocols to an already overstretched workforce, often with limited budgetary support. Frontline workers were deemed essential and continued working despite limited guidance, training, or protection against COVID-19, including the initial absence of vaccines and treatments (Wanqiu et al., 2020). Workforce pressures were further compounded by social distancing measures, employee and family illness, and school and daycare closures ("Reports Outline COVID-19 Study Findings from McGill University: A Scoping Review on Psychosocial Consequences of Pandemics on Parents and Children," 2021). More than ever, service providers faced the dual challenge of securing and training a competent workforce while ensuring the safety of both workers and individuals accessing services during the pandemic (Haider et al., 2020).

Against this backdrop, this dissertation examined online learning in Alberta's PDD sector from the perspective of frontline workers. It proposed that frontline workers' perceptions of online learning could generate important insights for future workforce development initiatives. By understanding the challenges frontline workers face and designing solutions informed by their perspectives, it becomes possible to develop a more comprehensive understanding of the PDD sector and to better support its workforce going forward.

Significance of the Study

Albertans, their families, and their communities depend on community and social services for income support, employment assistance, disability support, and other community-based services. This socio-economic workforce must be equipped to support Albertans during times of crisis, foster resilience, and strengthen families so that they may thrive (Government of Alberta, 2021). However, individuals accessing services may experience inconsistent service quality depending on the skills and preparedness of the employees who support them. Accordingly, the workforce delivering these services must be well trained and capable of performing its responsibilities thoroughly and competently (Wehman et al., 2018).

The prosperity and sustainability of community and social services are increasingly at risk due to a shortage of skilled frontline workers. In this context, an underprepared workforce may have devastating consequences, including the death of a worker or an individual accessing services. A fatality inquiry into the 2011 scalding death of a disabled man at a care facility emphasized the critical role of frontline workers in preventing harm and highlighted the need for greater support for this workforce (Northy, 2019). That same year, Valerie Wolski was strangled by a client at the facility where she worked, and the resulting fatality inquiry suggested that failure to follow

government policies contributed to her death. More recently, Deborah Onwu, a 47-year-old Community Service Practitioner, was fatally stabbed while working at an assisted-living residence. Early reports suggested that Occupational Health and Safety violations were a contributing factor (The Canadian Press, 2019).

Frontline workers also experience one of the highest workplace injury rates in Alberta (Government of Alberta, 2020b). Deborah Onwu's death brought broader public attention to concerns already present within the PDD sector, including a shortage of skilled workers and the resulting occupational health and safety risks, such as working alone and being exposed to high-risk situations daily (Croteau, 2019). As Northy (2019) observed, leaders must critically examine how vulnerable and high-risk populations are supported and consider the long-term implications for both those receiving care and those providing it. The need for change is urgent.

Within this context, online learning offers a potentially effective means of enhancing organizational knowledge, supporting learning, and developing workforce skills. It also represents an efficient, accessible, and easily updated option for service providers operating under funding constraints (Rosenberg, 2006). This research examines the online learning experiences of frontline workers and offers insights into how learning may help address skills shortages while further protecting worker safety. A research-informed approach to education and training in the PDD sector may help ensure that frontline workers are equipped to provide the highest possible quality of care to vulnerable groups in society (Ravichandran & Mishra, 2017; Shipton & Lashewicz, 2017; Stylianou & Savva, 2016; Truong et al., 2021).

The Theoretical Framework for the Study

Alberta's Persons with Developmental Disabilities (PDD) sector continues to experience a shortage of skilled frontline workers, with important implications for the quality of services delivered. A confluence of factors, including low skill levels, turnover, age, and related workforce pressures, creates an ongoing need for relevant and reliable education and training (Halton, 2012; Ricciardi, 2005). As the sector continues to navigate recovery from the Coronavirus disease (COVID-19) pandemic, it is important to recognize the social value of frontline workers, who worked ceaselessly throughout this period, while also continuing to develop their competencies and skills. As Schleicher (2020) observed, "Real change often takes place in deep crises, and this moment holds the possibility that we do not return to the status quo when things return to 'normal'" (p. 26). Although the pandemic introduced disruptive variables into online learning, informed responses to these disruptions may offer lasting value to the PDD sector.

The experiences of frontline workers provide important insight into the realities of their work and learning, revealing perspectives shaped by structural conditions and capable of informing future directions within the sector (Kishishita, 2020). This study adopted a pragmatic approach that was attentive to the vulnerable, marginalized, and structurally disadvantaged nature of the PDD workforce. In doing so, it enabled an exploration of the real-world drivers and restraining factors shaping online learning experiences,

The theoretical foundation of this study was Force Field Analysis (FFA), which, emphasizes human agency while also accounting for the influence of external structures and forces (Houston, 2001). Applied to online learning, FFA offers both practitioners and scholars a workforce-centred lens through which to understand the drivers and restraining factors shaping online education in Alberta's PDD sector. This research sought to identify future directions for online learning research and to provide managers and policymakers with insight into how online learning strategies might be strengthened within the sector (He et al., 2018). Workforce learning must respond to the specific realities of the PDD sector, and this study aimed to generate a deeper understanding of frontline workers' needs and the conditions that support meaningful and effective learning experiences (Rosenberg, 2006).

A pragmatic approach also allowed this study to recognize the multiple ways in which knowledge is created and understood. To authentically capture the real-world experiences and perspectives of frontline workers, the research drew on a combination of approaches that broadened the exploration of the political, economic, and cultural conditions within which online learning is produced and implemented. Through the combined lens of pragmatism and FFA, an exploratory process unfolded that recognized the complexity and dynamism of the phenomenon under study. Rather than assuming a single causal explanation, the research acknowledged that online learning experiences in the PDD sector are shaped by multiple interacting forces.

Force Field Analysis

This research was grounded in the view that implementing online learning in Alberta's Persons with Developmental Disabilities (PDD) sector involves more than simply delivering knowledge to a designated workforce. Rather, it requires attention to the wider system and to the

interacting, interdependent elements that shape how learning is accessed, experienced, and sustained. In this sense, the study adopted a macro-level perspective of the "field" within Force Field Analysis (FFA), which offers a broad understanding of a situation and of the elements that may influence, or be influenced by, that situation directly or indirectly (Dubey, 2017).

Using Kurt Lewin's Force Field Analysis, this research approached education as a social process that unfolds within groups and contexts. As Lewin (1997) argued, "Education depends on the real state and character of the social group in which it occurs." In keeping with this view, the present study sought to understand frontline workers' online learning experiences not as isolated individual acts, but as experiences shaped by workplace realities, sector conditions, and broader social pressures. Through analysis of workforce experiences, the study aimed to generate grounded evidence about how frontline workers in Alberta's PDD sector experienced online learning during the COVID-19 pandemic. This mixed-methods case study addressed a clear gap in the literature, particularly the lack of workforce-centred research on online learning in this sector. It also aligned with a social constructivist epistemology by recognizing that, amid the turbulence of the pandemic and through a sociocultural lens, a richer understanding of the realities of being a frontline worker could be developed (Martinez-Brawley, 2020).

Accordingly, this research asked: In what ways can the exploration of frontline workers' online learning experiences generate sector-wide insights into online learning, and what are the drivers and barriers to online learning for frontline workers in Alberta's PDD sector?

Force Field Analysis was introduced by Kurt Lewin as a means of examining group dynamics, behaviour, and the conditions required for change. It permits examination of the whole situation, including the relationship between the group under study and the internal and

external forces shaping its behaviour. In the present study, FFA provided a way to examine the immediate online learning situation while also situating that experience within the wider organizational and sectoral environment. Through this approach, it becomes possible to develop a fuller understanding of the behaviours, tensions, and conditions surrounding online learning uptake and experience (Burnes & Bargal, 2017). If the PDD sector seeks to use online learning to respond to skills shortages, budgetary pressures, and the disruptions associated with COVID-19, it is essential to identify the key forces operating within that environment and to understand how those forces may be leveraged, reduced, or otherwise addressed to support meaningful change.

The distinction between driving and restraining forces is especially relevant to this research. The literature review strongly suggested the presence of both, yet further investigation was required to determine whether these forces enabled or hindered online learning within the sector. The purpose of this study was not to quantify forces in any precise causal sense, but rather to develop an understanding of how frontline workers experience online learning and why those experiences take the forms they do. In this respect, FFA served as a useful framework for examining online learning within an organizational context and for generating grounded insights that could inform future online learning environments. As Burnes and Cooke (2013) noted, implementing change within organizational settings requires careful attention to sources of resistance and to the behavioural conditions that shape change processes.

An FFA framework therefore guided this research in investigating and interpreting the complexity of the PDD sector. Lewin (1943) described the ability, intention, or tendency of an actor or element to influence a situation as a “force.” These forces may vary in both intensity and direction. The “force field,” then, is the relative distribution of such forces and is what

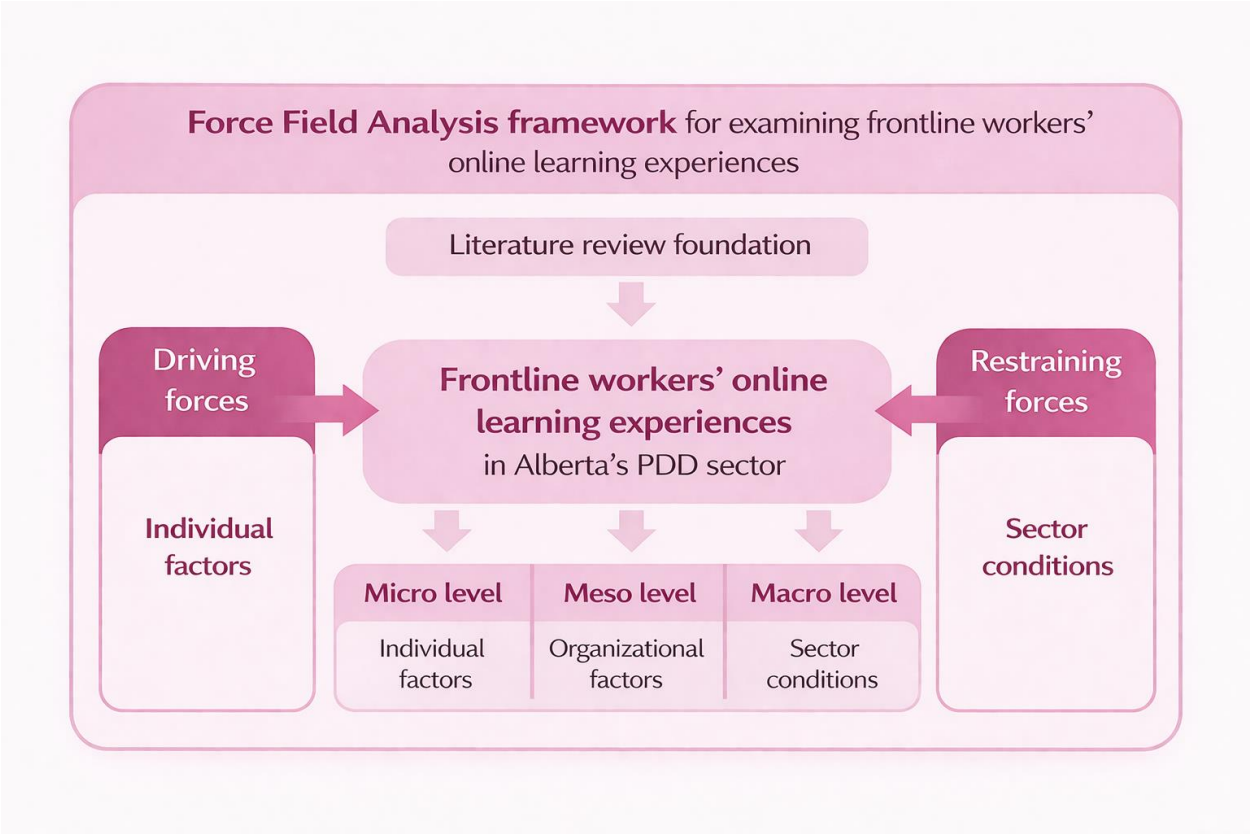
determines a situation at any given moment (Lewin, 1951). As Shrivastava et al. (2017) suggested, FFA can be effectively used in community health contexts to identify and assess positive and negative forces shaping a given situation. This was especially relevant to the present study, which examined online learning experiences within a dynamic sector shaped by workforce instability, complex caseloads, accreditation expectations, financial constraints, and pandemic disruption.

Importantly, Force Field Analysis is also well suited to conceptual and qualitative data. In Lewin's tradition, FFA is not confined to numerical measurement. Rather, it functions as an analytic framework for identifying, organizing, and interpreting the interacting forces that shape a social situation. This broader application is supported in the literature. Makan et al. (2015), for example, reported that qualitative content analysis was conducted and that Force Field Analysis was then applied in a multi-country stakeholder analysis. Brown et al. (2020) likewise described their work as a qualitative exploratory study using Interpretive Description together with Force Field Analysis. McNett et al. (2022) used qualitative content analysis of facilitators and barriers and then applied Force Field Analysis, using Lewin's change theory, to organize those findings. Han et al. (2023) further demonstrated the continued use of Force Field Analysis as a qualitative analytic framework in organizational research. Taken together, these studies support the use of FFA in the present study as a conceptual and interpretive lens through which frontline workers' experiences, perceptions, and open-ended responses can be organized into interacting driving and restraining forces across the micro, meso, and macro levels, rather than as a claim to precise causal measurement of each force.

This conceptual organization is illustrated in Figure 1, which visually maps the key forces identified in the literature review as shaping online learning in the PDD sector. Rather than presenting these factors as isolated variables, the figure depicts them as interacting drivers and restraints operating across multiple levels of influence. In doing so, it reinforces the central premise of this dissertation: frontline workers' online learning experiences are shaped not only by individual characteristics, but also by organizational conditions and broader structural realities. The figure serves as a conceptual bridge between the literature review and the empirical phases of the study, showing how previously identified forces informed the analytical structure used to interpret the survey findings and open-ended responses.

Figure 1

Conceptual force field map of micro, meso and macro forces identified in the literature



Note. The figure presents the principal driving and restraining forces related to online learning identified in the literature review and organized conceptually using Lewin's force field analysis. The figure is intended as a heuristic and analytic guide for the study rather than as a quantified model of causal effect.

The literature review identified many of the driving and restraining forces affecting online learning in the PDD sector from a workforce-centred perspective (see Chapter 2, Figure 1). These forces included supports and constraints emerging at the micro, meso, and macro levels, and they established the conceptual foundation for the present study. By visually organizing these forces, Figure 1 provides an overview of the tensions surrounding online learning before the data analysis chapter examines how those tensions were experienced and described by

frontline workers themselves. In this way, the figure is not merely illustrative; it is analytic, as it reflects the force field logic that underpins the dissertation.

This research sought to identify and analyze the drivers and barriers to successful online learning in ways that would provide practical insight for PDD stakeholders. For Lewin, identifying the drivers of behaviour was closely linked to understanding the conditions and activities that increase people's available resources for action (Becker, 1993). In Alberta's PDD sector, workforce skills must respond to dynamic labour market demands (Burleton et al., 2013), and targeted online learning strategies are needed to meet the changing needs of a diverse workforce. Long-term and meaningful change requires targeted approaches to identify, recruit, engage, and retain talent that is valued and needed (Ray, 2012). By examining the intersection of constraint and opportunity, and the dynamic tensions therein, transformative insights can emerge (Houston, 2001).

Using Lewin's (1951) force field analysis alongside a mixed-methods case study survey approach, this research explored shaping forces within the intrapersonal, interpersonal, organizational, and societal dimensions of frontline workers' online learning experiences (Houston, 2001). At the time of this study, discourse within the PDD sector was already being shaped by COVID-19, budget constraints, complex caseloads, and broader workforce pressures. This created a highly dynamic environment in which online learning could not be understood outside of its organizational and sectoral context. The study sought to identify the drivers and barriers shaping frontline workers' online learning experiences while recognizing that those experiences are inseparable from the specific realities of the organization, sector, and workforce in which they occur.

Statement of Problem

Frontline workers (FLWs) within the PDD sector are integral to the accessibility, safety, and quality of the social services that support Alberta's vulnerable populations. Poignantly, FLW demographics reveal that they, too, are vulnerable, marginalized, and structurally disadvantaged. There is a dearth of research on the systemic and socioeconomic determinants of skills shortages, which reveals a tenacious interplay of factors. Research often fails to take the workforce's perspective into account when discussing skills shortages, instead focusing on the broader impact on service providers or community service delivery.

A skilled workforce is the foundation of economic prosperity. Organizations seek the right employees, in the correct positions, with the right skills, at the right time (Stokker & Hallam, 2009). Skill shortages occur when employers are unable to hire staff with the required skills for the salary presented (Quintini, 2011). The implementation of standardized training programs and the formalization of skills development foster the sustainability and growth of positions within the PDD sector (DeAngelis et al., 2017). How do service providers secure and train the appropriate workforce to achieve quality outcomes, while also safeguarding them in the face of the complex, overburdened, and high-risk work environment during a global pandemic?

It is critical to understand frontline worker behaviour, emotional reactions, staff beliefs, and feelings about their work when considering any educational initiatives (Whittington & Burns, 2005). Training and education are consistently identified in the literature as avenues that can directly improve the community and long-term care (Kelly, 2017). An online learning approach to skills shortages historically creates avenues for discussion, reduces costs, increases wages, increases safety, and appeases multiple stakeholders (Sheets, 1992). Today, online

learning programs improve learning, develop critical thinking skills, and increase labour market outcomes (Bartlett & Whit, 2021). It is recommended that "every course should be designed with the learner in mind. Learner-centred instruction places the student at the center of instruction, so students are active learners rather than passive participants" (Altay, 2014). This research highlights the importance of deeply exploring the contextual factors inherent within the PDD sector in a pragmatic approach to online learning.

Limitations and Delimitations

Skepticism of academic work on skills shortages within the sector remains prevalent due to the ongoing challenge of identifying and measuring skills (Bosworth, 1993; Sloane et al., 2015). Many of the problematic aspects of the work and skills employers seek cannot easily be measured or articulated, such as motivating others and managing challenging behaviour (Shepherd & Meehan, 2013). In addition, prior initiatives to address skill shortages focus on increasing the workforce through immigration and lack a quality assurance mechanism. Employers voice concerns about the quality of the qualifications held by the immigrant workforce. With the COVID-19 pandemic and this essential immigrant workforce now permitted to cross into Canada at a higher rate, the quality assurance mechanism comes under further scrutiny (Misko, 2015; Organisation for Economic Co-operation and Development [OECD, 2013]; Helps et al., 2021).

Resistance to FLW skill development initiatives increased during the COVID-19 pandemic, as many workers left the profession entirely due to burnout, stress, and increased health risks. Education and training within an industry with high turnover do not seem as critical as supporting and better compensating the workforce to incentivize them to stay (Uzdavines, 2022).

The insights and recommendations from this research, especially when viewed through a workforce-centred lens, may be seen as lacking the credible, motivating information needed to influence online learning changes in this sector.

Research suggests that financial constraints remain a significant barrier to training investment for some service providers, and with the high turnover in the PDD sector, returns on investment are rarely realized. Due to a lack of training infrastructure, service providers may exhibit greater uncertainty about training initiatives, and employers are less likely to invest (Gyarmati et al., 2020).

Variations in service providers' recruiting, hiring, and retention practices, such as in-house training, development, and performance bonuses, may impact the findings of this research. Thus, the research sought to capture the essential voices of frontline workers in a manner that recognized that human, technical, or organizational elements may influence the results depending upon the agency the FLWs work at (Ferreira & Saurin, 2019; Haro & Kleiner, 2008).

This research, conducted during a great upheaval, may threaten the validity or completion of the study. For FLWs who already experience marginalization and vulnerabilities, they may experience greater stress, alongside the additional stresses placed upon the individuals they support as well (Racionero-Plaza et al., 2021). For example, FLWs within other similar sectors, such as gerontological services, see an emergence of stressors that require further education in areas such as ageism, social isolation, technology, and interprofessional practices. Research indicates that FLWs require the education and training necessary to meet the demands that emerge with COVID-19; however, the negative consequences of the pandemic, such as increased health problems, increased levels of depression, and lower family income, may impact the

research findings (Berg-Weger & Schroepfer, 2020; Lightfoot et al., 2021; Schulz & Eden, 2016).

Using a force field analysis approach, this research examined the totality of coexisting factors within the online learning space, the person, and the environment, which can help alleviate any limitations of the study that may emerge due to COVID-19 (Lewin & Lewin, 1997).

The future of the PDD sector depends on the education and support of quality FLWs through policies and practices that address both recruitment and retention goals. However, changing the image and value of the FLW role remains essential for the development of this workforce in the future. An investment in resources, training, ongoing education, and support is required to produce and sustain quality services. Stone (2004) states that for workforce investment to take place, "the public will have to make some decisions about the value of this workforce, including whether these direct care workers deserve a livable wage and adequate benefits" (p.348). Research suggests that flattening the organizational hierarchy, empowering frontline workers, and implementing other interventions must consider policy and practice strategies, as well as the stakeholders' values and beliefs.

FLWs' online learning opportunities do not appear to have been adequately documented or researched. Additionally, historical or benchmark data that could help to determine the long-term patterns and implications of online learning is not available. Nevertheless, this research dissertation will fill a gap in the literature on online learning within the current workforce (Melguizo & Perea, 2016).

Lastly, this dissertation topic may be analyzed from other theoretical perspectives, such as complexity theory. Complexity theory recognizes the dynamic socio-procedural structures within

which FLWs operate (Ferreira & Saurin, 2019; Haro & Kleiner, 2008). Social science research trends toward supporting the concept of a "wicked problem" (Termeer et al., 2019). Studies identify societal, operational, political, financial, and healthcare issues as wicked problems that are unique and complex. This research study may be viewed as having a limited understanding and compassion toward the dynamic socio-procedural structures within which FLWs work (Ferreira & Saurin, 2019; Haro & Kleiner, 2008).

This dissertation methodologically approached this research from a worker-centred lens and aimed to empower workforces to generate knowledge to achieve and sustain workforce, sector, and policy reforms. The research recognized the relationships that exist between community and social services, and the results may be viewed as interpretive or subjective. This exploratory case study approach can lay the groundwork for additional research to quantify online learning demand, especially considering post-COVID-19 pandemic needs in Alberta.

Despite these limitations, the research findings are meaningful. The relationships between FLWs' self-reported educational experiences and interactions with online education have important implications for practice and service delivery (Muñoz-Pascual & Galende, 2017). The study can support advances in educational endeavours in online learning frameworks, which are consistently identified in the literature as an avenue to improve the community and long-term care directly (Kelly, 2017).

Research Questions

1. What were the driving and restraining factors impacting the online education experiences of frontline workers (FLWs) in Alberta's Persons with Developmental Disabilities (PDD) sector?

2. To what extent did the driving and restraining factors impact FLWs' online learning experiences?
    a. How did FLWs perceive the driving and limiting factors impacting their online learning experiences?
3. What insights can be provided by the driving and restraining factors identified towards online learning of frontline workers in the PDD sector in Alberta?
    a. What valuable insights regarding the driving and restraining factors can be gained from an FLW's perspective?

Summary

Kurt Lewin's legacy in learning, development, and group dynamics within industry builds the foundation for this research by emphasizing the value of examining cognitive structures and the "constellation of forces" that impact online learning. "One part or aspect of the living space depends upon other parts or aspects. Of course, both problems are interrelated since any behaviour resulting from a certain situation alters the situation to some degree" (Lewin & Lewin, 1997, p. 361).

For the FFA framework to inform online learning within the PDD sector, the significance of the learning forces imposed on FLWs must be holistically understood, disseminated, and integrated into online learning initiatives. It is not enough to find and retain any acceptable FLWs. The quality of that workforce can be enhanced by developing resources, training, ongoing education, and support that are identified as drivers of the online learning experience (Stone, 2004). "Until recently, very little attention has been paid to the availability and quality of the

workforce that provides the services and supports" (Stone, 2004, p.339). There is a critical need for research to address the skills gap among FLWs by investigating the drivers and barriers to online learning and by moving towards informed online learning opportunities that align with the demographic characteristics and working conditions of the PDD sector.

Chapter 2: Background Information and Literature Review

Introduction

Skills shortages of frontline workers within the Persons with Developmental Disabilities (PDD) sector have been well documented. A targeted and adaptive approach to address skills shortages is critically needed, especially during the recent global pandemic and as new factors continue to shift labour market demands and the need for a skilled workforce (Dawson et al., 2021). Online learning is widely regarded as a valuable option in a variety of contexts, including within the workplace (Żur & Friedl, 2021). However, there remains a lack of research regarding frontline workers' experiences with online learning. Further insights are needed to understand how workforce demographics and contextual nuances within the PDD sector impact the learning experience.

As employers seek cost-effective, convenient, and standardized online learning formats—a trend intensified during the COVID-19 pandemic—they must not overlook the importance of tailoring online learning to employee needs (Żur & Friedl, 2021). "It is widely recognized that placing the needs of the employee at the center of the online learning experience is imperative. Workplace learning that seeks to develop a model of continuous learning and growth must be learner-driven" (Pelster et al., 2016).

This literature review situates the research within the environment. A macro-level understanding of skills shortages, accreditation standards, increasing complexity of caseloads, health and safety pressures, and the COVID-19 pandemic collectively informs the emergence of online education within the PDD sector (World Health Organization, 2020). The review focuses more specifically on micro-level (individual frontline workers) and meso-level (organizational

service-providing agencies) factors influencing online learning in Alberta's PDD sector. It provides:

- An understanding of demographic research regarding frontline workers (FLWs) and implications for online learning.
- An examination of variables within service-providing agencies that could impact online learning initiatives.
- A review of sector-wide drivers impacting online education (Bates, 2005).

Definition of a Frontline Worker

Occupational titles vary considerably within and across sectors, both in Canada and globally (Jackson & Parks, 1997; Rhodes et al., 2007; King, 2016). This variability has produced overlapping classifications and inconsistent terminology within research literature (Taylor et al., 2018). Because FLWs lack a singular definition, as well as precise statistical workforce data, defined competencies, and a common vocabulary, a clear operational definition is necessary for this dissertation (Torres et al., 2013).

There is also limited research on standard work practices and variables that support or impede the development of successful online learning initiatives (Taylor et al., 2018). Role ambiguity may stem from evolving perceptions of the FLW role or varying interpretations across service-providing agencies (Morrison, 1994). This lack of consensus has implications for workforce development and online learning implementation.

Media portrayals of the PDD sector further complicate public understanding of the FLW role, sometimes glorifying and at other times portraying it unfavorably (Manthorpe et al., 2018).

Understanding FLWs' motivations, values, and lived realities is critical for developing learning that is relevant, appropriately timed, and contextually accurate (Rosenberg, 2006).

In Canada, FLWs fall under the occupational classification of Community Services Workers within National Occupational Classification (NOC) 4212 (Government of Canada, 2018). Although Community Health Workers and Health Support Workers are sometimes used interchangeably in literature, these roles are unregulated and differ in employment context. Workers employed by hospitals, health care professionals, or nursing homes are excluded from this research sample (Government of Canada, 2018).

Research concerning the broader "care workforce" and "direct care" sectors provides valuable insights into recruitment and retention (Hussein, 2018). However, distinctions are maintained, as home health aides often collaborate with registered nurses within certified agencies and are subject to different training requirements (Stone, 2004).

Within Alberta's PDD sector, FLWs include Community Disability Services Workers (CDSWs) and Community Disability Services Practitioners (CDSPs). These positions are considered entry-level, though CDSPs may possess greater experience (Alberta Council of Disability Services, 2020b). For this review, FLWs are treated as an amalgamated occupational category encompassing direct service workers supporting individuals with intellectual and developmental disabilities (Hewitt et al., 2008).

FLWs are employed in an unregulated occupation and are not subject to provincial professional regulation. Regulated professionals such as social workers and psychologists are excluded from this study. FLWs provide direct support, including assistance with daily living,

community participation, emotional support, medication compliance, and promotion of healthy lifestyles (Hewitt et al., 2008).

Definition of the PDD Sector

In Alberta, the Ministry of Community and Social Services administers funding for programs supporting adults with developmental disabilities to participate in their communities and live as independently as possible (Government of Alberta, 2013). Individuals accessing services (IAS) demonstrate significant limitations in intellectual capacity and adaptive skills (Government of Alberta, 2020a).

Approximately 160 non-profit and for-profit service-providing agencies deliver PDD-funded services across Alberta (Sonpal-Valias, 2019). Under the Persons with Developmental Disabilities Services Act, a service provider is defined as a person or organization that provides services to adults with developmental disabilities (Government of Alberta, 2015).

Definition of Service-Providing Agencies

Alberta's PDD service model operates under a two-tier structure. The first tier comprises family-managed services, in which families hire and manage support staff. The second tier comprises community-based service-providing agencies that deliver structured programs in accordance with provincial standards (Sonpal-Valias, 2019).

This study focuses exclusively on community-based service-providing agencies. These agencies operate under the Creating Excellence Together (CET) Standards, which define expectations for service-delivery quality (Alberta Council of Disability Services, 2021).

Agencies must meet contractual and accreditation requirements to maintain approval status (Government of Alberta, 2015).

Mandatory training accounts for 70.9% of training budgets within community-based agencies (Alberta Council of Disability Services, 2020c). Workforce learning practices are resource-intensive and often driven by compliance requirements rather than strategic professional development. Despite significant investment, limited empirical research evaluates the effectiveness of these learning practices, particularly following shifts introduced during the COVID-19 pandemic.

Definition of High-Quality Workplace Online Learning

Workplace learning has evolved from informal on-the-job skill development to encompass structured competence, performance training, socialization, and professional development (Paget & Kottke, 1998). Advances in technology have expanded workplace learning to include web-based platforms, virtual environments, and digital collaboration tools (Cheng et al., 2014).

Although online learning literature is extensive in higher education, research specific to workplace contexts remains comparatively underdeveloped (Daneshgar et al., 2009). Online workplace learning spans multiple disciplines, including education, computer science, social sciences, and business (Cheng et al., 2014).

Cheng et al. (2014) identify six thematic domains of online workplace learning: continuing education, computer-assisted training, occupational health and safety education, healthcare education, social media for informal learning, and knowledge management.

However, high-quality online learning extends beyond digital content delivery. Providing high-quality learning materials alone is insufficient (Schaefer et al., 2019). Research emphasizes collaboration, social presence, participatory design, and application to workplace practice as defining characteristics of effective online learning (Schaefer et al., 2020). Social interaction fosters reflection, co-construction of knowledge, and sustained skill development (Schaefer et al., 2019).

Participatory design principles and multimedia learning theories enhance engagement and organizational return on investment (Daneshgar et al., 2009). Leadership support and technological infrastructure are equally critical, as inadequate connectivity and technical barriers can undermine learning adoption (Daneshgar et al., 2009).

Force Field Analysis Within Online Learning

Force Field Analysis (FFA) provides the theoretical foundation for examining online learning adoption within Alberta's PDD sector. The theory conceptualizes change as the result of interacting positive and negative forces that shape behavior and decision-making (Miller, 1967). Within workplace education contexts, FFA allows researchers to examine both the drivers that encourage learning adoption and the restraining forces that inhibit engagement.

Rabak and Cleveland-Innes (2006) applied FFA to corporate online learning environments to explain patterns of acceptance and resistance. They argued that equal importance must be attributed to understanding what encourages learners to embrace online learning and what causes resistance. This balanced perspective is particularly relevant within workforce development, where structural, psychological, and situational forces coexist.

Lewin's foundational work situates FFA as a social science framework for analyzing social conflict and identifying strategies to reduce resistance (Lewin, 1997). Change occurs when the equilibrium between driving and restraining forces is disrupted. In workforce learning environments, this equilibrium is influenced by leadership decisions, employee perceptions, workload realities, funding constraints, and technological readiness.

FFA serves as an equilibrium model in which psychological and situational forces are examined collectively to determine what must shift to alter the present state (Miller, 1967). Frequently used in change management and business transformation, FFA offers a structured approach to identifying the processes that support or hinder transformational efforts (Toves et al., 2016).

Paying attention to resistance factors is essential in online workplace learning. When employees are given opportunities to express concerns and contribute insights, organizations can better anticipate obstacles, reduce implementation costs, and strengthen adoption strategies (Gotsill & Natchez, 2007).

Within an FFA framework:

- Driving forces enhance online learning engagement.
- Restraining forces hinder or resist online learning participation.
- Change occurs when restraining forces are reduced, or driving forces are strengthened (Laforest, 2011).

In online education, particularly workplace online education, FFA facilitates the identification of contextual barriers embedded within the workplace. Insights derived from these analyses can inform future initiatives to mitigate potential obstacles. For service-providing agencies, instructional designers, and stakeholders invested in high-quality online workplace learning, FFA provides a structured method for anticipating problems, strengthening adoption, and systematically reducing barriers (Toves et al., 2016).

In the context of Alberta's PDD sector, FFA is particularly appropriate because the adoption of online learning does not occur in isolation. Rather, it is shaped by interacting demographic characteristics, organizational structures, accreditation requirements, funding models, and sector-wide pressures. This study applies FFA to examine how these interacting forces influence frontline workers' online learning experiences.

Micro-Level Influences on Online Learning

Within Alberta's PDD sector, frontline workers (FLWs) comprise approximately 72% of the workforce (Alberta Council of Disability Services, 2019). Despite their central role in service delivery, there remains a lack of comprehensive statistical data and occupational consolidation from the Government of Canada (Carey, 2014). Existing workforce data are often outdated and insufficiently detailed to guide long-term planning (Alberta Council of Disability Services, 2023). Understanding FLW demographics is essential when designing learning that is relevant, accessible, and delivered at the right time and place (Rosenberg, 2006).

Research suggests that younger learners, those from higher socioeconomic backgrounds, and individuals with higher levels of education report stronger digital skills and greater participation in online learning (Eynon & Malmberg, 2021). However, FLW demographics reflect a

workforce characterized by structural vulnerability, including an aging labour force, gendered participation patterns, immigrant representation, mental health challenges, and economic precarity (Meagher, 2007; Campbell et al., 2021; Uzdavines, 2022). These intersecting characteristics shape online learning engagement and must be considered within workforce development strategies.

Gender

Women comprise approximately 73% of Alberta's PDD workforce (Alberta Council of Disability Services, 2019; Alberta Council of Disability Services, 2022d; Frizzell, 2016). Over time, female FLWs have tended to be younger, more educated, and more likely to have caregiving responsibilities (Stone, 2004; Johnson, 2022).

Care-related occupations are historically undervalued and often situated within gendered labour structures. Women and women of colour are more likely to receive lower wages (González et al., 2022). Although women-dominated occupations do not necessarily involve lower skill levels, care work remains associated with gendered expectations and occupational segregation (Hussein, 2018).

Research indicates that women increasingly balance multiple caregiving roles, both at work and at home (Romero & Pérez, 2016). As workforce shortages intensify, these intersecting pressures influence recruitment, retention, and training engagement (DePasquale et al., 2017).

Women and Online Learning

Among online learning audiences, particularly during the COVID-19 pandemic, women have experienced lower exposure to digital technologies and barriers related to access, affordability,

and technological literacy (OECD, 2018). Reduced prior exposure to digital tools can influence attitudes, anxiety, and performance in online environments (Morin et al., 2019).

Women working multiple jobs face additional scheduling constraints that limit access to training (Alberta Disability Workers Association, 2018). Public health directives during the COVID-19 pandemic further restricted multiple job holding, significantly impacting service providers (Alberta Council of Disability Services, 2022d). Irregular schedules, childcare responsibilities, and caregiving demands create barriers to sustained online learning engagement (Gatta, 2008).

Weatherly (2011) identified barriers such as pregnancy, illness, caregiving responsibilities, and personal stressors affecting women's online degree completion. Additionally, women may report lower self-efficacy and higher computer-related anxiety (Sultan & Kanwal, 2017). These findings underscore the importance of designing online learning initiatives that recognize structural and psychological barriers affecting female FLWs.

Age

The average age of employment within Alberta's PDD sector is 41.9 years (Alberta Council of Disability Services, 2019). Employment growth has been particularly significant among workers aged 65 and older (169% growth) and those aged 45–64 (79% increase) (HR Council for the Non-Profit Sector, 2013; MacDonald & Merrill, 2002). These trends align with broader demographic shifts associated with the aging Canadian workforce (Armstrong-Stassen & Templer, 2005; Wisse et al., 2018).

Chronological age is a weak predictor of productivity (McMahan & Sturz, 2006). However, organizations have not consistently adapted training strategies to meet the needs of older workers (Armstrong-Stassen & Templer, 2005). Older workers may experience higher rates of occupational injuries and reduced psychological support (DePasquale et al., 2017).

Needs, motives, and workplace values differ across the lifespan (Armstrong-Stassen & Templer, 2005; Wisse et al., 2018). Younger workers demonstrate higher turnover rates, particularly those aged 20–24 (51%) (Alberta Council of Disability Services, 2019). Only 33% of FLWs are under age 35 (Alberta Council of Disability Services, 2019).

Research also indicates that perceptions of service needs may vary across age groups (Burke & Heller, 2017). Although disability education programs exist, a lack of professional recognition and wage disparity may discourage entry into the field (Rillotta & Alexander, 2020).

Age and Online Learning

Older learners may demonstrate strong self-direction but may experience lower digital self-efficacy and higher computer anxiety (Morin et al., 2019; Sultan & Kanwal, 2017). Curriculum design may need to accommodate cognitive processing differences and sensory limitations (Jones & Bayen, 1998).

Younger workers may demonstrate greater technological fluency but face higher turnover and sector attrition (Alberta Council of Disability Services, 2022d). Designing a unified online learning experience that addresses generational differences remains a critical challenge.

Visible Minorities, Immigrants, and Language Proficiency

Workforce ethnicity and immigration data specific to Alberta's FLWs remain limited (Torres et al., 2013). However, immigrant women increasingly contribute to direct-care labour in Canada (Howe et al., 2019). During the COVID-19 pandemic, temporary essential healthcare workers faced increased risk exposure and psychological strain (Arsenault, 2021; Hill & Farrell, 2022).

Research suggests that approximately 40% of Personal Support Worker students speak English as a second language, and 23% identify as visible minorities (Kelly, 2017). Cultural values influence service delivery, professional identity, and training needs (Periyakoil, 2019; Hugman, 2012).

Limited English proficiency may hinder documentation and reporting but can improve the quality of care when supported appropriately (Lopez, 2005; Overgaard et al., 2022). Integration into digital learning environments requires language support and culturally responsive instructional design (Castaño Muñoz et al., 2018).

Diversity and Online Learning

Online learning uptake among migrants is associated with education level and digital literacy (Castaño Muñoz et al., 2018). Workforce diversity enhances innovation and performance (OECD, 2012; Kristinsson et al., 2016). However, minority status may correlate with lower satisfaction in web-based education (Ke & Kwak, 2013).

Culturally reflective educational experiences improve professional confidence and well-being (Kilanska & Priest, 2014). Multicultural competency development requires sustained engagement and flexible educational frameworks (Hugman, 2012; Eynon & Malmberg, 2021). Sensitivity training and anti-discrimination policies contribute to improved workplace satisfaction (Ejaz et al., 2008).

Low Wages and Job Tenure

Compensation significantly influences job satisfaction and retention (Iacono, 2010; Kemper et al., 2008; Alberta Council of Disability Services, 2022d). The average FLW earns approximately $18.76 per hour, or just over $35,000 annually (Community Disability Services Practitioner: Occupations in Alberta - Alis, 2021; Alberta Council of Disability Services, 2022d).

Although Alberta's official poverty line is $27,886 (Laidley & Tabbara, 2023), disposable income thresholds for family stability are considerably higher (Djidel et al., 2020; A Critical Assessment of Canada's Official Poverty Line, 2020).

Women-dominated care occupations experience structural wage suppression (England, 2005; Ejaz et al., 2008; Hussein, 2018). High turnover undermines continuity of care and community inclusion outcomes for individuals accessing services (Friedman, 2018; Alberta Disability Workers Association, 2018).

Approximately 26.7% of employees hold multiple jobs (Alberta Council of Disability Services, 2019), which affects work-life balance and stress (Panos et al., 2014; Gangan & Sankar, 2019).

Low Wages, Tenure, and Online Learning

Retention is influenced by pay, morale, training, and quality of life (Stevens et al., 2021). Competency-based training interventions are associated with reduced turnover (Bogenschutz et al., 2015). Workplace learning opportunities predict intention to remain employed (Govaerts et al., 2011).

Formal learning interventions can improve communication, well-being, and knowledge access (Watson et al., 2018; Coetzer et al., 2017; Doornbos et al., 2008; Fuller & Unwin, 2003; Rausch, 2013). Ecosystem models of online learning highlight interactions among technology, services, and organizational context (Aparicio et al., 2016).

Mental Health and Burnout

FLWs experience significant occupational stress and burnout (Hwang & Kearney, 2013; Ejaz et al., 2008). Pandemic conditions exacerbated exhaustion and isolation (Alberta Council of Disability Services, 2022).

Burnout predictors include inadequate staffing, insufficient pay, role conflict, and limited management support (Yeatts et al., 2018). Addressing mental health through training and development may increase feelings of personal accomplishment and reduce depersonalization (Leiter & Harvie, 1996; Barbosa et al., 2015; Martínez-López et al., 2021).

Skill Level and Technology Access

Approximately 27.6% of FLWs possess a high school diploma or less, and 41.9% hold a certificate or diploma (Alberta Council of Disability Services, 2020d). Standardized competency frameworks may strengthen workforce sustainability (Singh & Aridi, 2010; Alberta Council of Disability Services, 2022a).

Online learning can enhance employability and overcome structural barriers (Cort et al., 2018; AbuKhousa & Atif, 2014; Hewitt et al., 2008; Manning, 2012; Wagner et al., 2008). However, digital literacy and equipment access remain concerns (Barken & Armstrong, 2018; Gatta, 2008).

Educational attainment correlates with positive online learning perceptions (Ke & Kwak, 2013; Morin et al., 2019). Inclusive instructional strategies and accessible platforms are essential (Reeb, 2019; Koller et al., 2022; Calgary Service Provider Council, 2019; Gatta, 2008; Wylie, 2023).

Meso-Level Influences: Service-Providing Agency Characteristics

Understanding online learning adoption within Alberta's PDD sector requires examination of the organizational contexts in which frontline workers (FLWs) are embedded. Organizational structures, funding models, accreditation requirements, and internal processes significantly influence workforce training opportunities and learning integration (Ineland et al., 2018; Hatton et al., 1999).

The following agency-level characteristics are particularly relevant to online learning adoption: internal processes; funding structures; location (rural versus urban); organizational size and delivery model; and the value placed on innovation, professional development, accreditation, certification, and health and safety standards.

Internal Processes

Internal processes refer to the organizational systems, policies, and administrative supports within service-providing agencies. These vary substantially across agencies depending on staffing structures, availability of human resources personnel, financial systems, and established training procedures (Alberta Council of Disability Services, 2020).

Workplace learning within service-providing agencies is frequently informal and embedded within daily practice. Because agencies are rarely structured explicitly for learning, workers must be intentionally supported to recognize and engage in pedagogical opportunities (Choy et al.,

2013). Organizational policies that embed training expectations within operational frameworks promote workforce development and signal the value placed on employee growth (Shipton & Lashewicz, 2017).

On-the-job training remains the most common approach within the Canadian PDD sector (Najafizada et al., 2015). However, the delegation of complex responsibilities from higher-skilled to lower-skilled workers may raise concerns regarding competency and safety (Barken & Armstrong, 2018). External pressures, including staffing shortages and pandemic disruptions, further affect the quality and consistency of internal training systems.

Organizational leadership is central to fostering a learning culture. Leadership that encourages professional development and supports online learning initiatives increases the likelihood of successful adoption (Daneshgar et al., 2009). Investment in technological infrastructure reduces practical barriers such as unreliable internet connections and technical disruptions (Daneshgar et al., 2009).

Funding Constraints

Alberta's PDD service-providing agencies operate within a provincially mandated procurement model characterized by competitive funding processes (Osler et al., 2020). Funding scarcity and short-term contractual cycles constrain long-term workforce development planning (Halton, 2012).

Service-providing agencies must allocate training costs from operational budgets, with training accounting for approximately 2.4% of total operating expenses (Alberta Council of Disability Services, 2019). Mandatory training averages $383 per employee, excluding travel and

coverage costs, while internally delivered training reduces costs to approximately $34 per employee (Alberta Council of Disability Services, 2019).

Collaboration across agencies is often limited due to competitive procurement structures (Harper-Anderson & Gooden, 2016). Scarcity of funding compels agencies to pursue revenue diversification and cost containment strategies (Brown, 2018). Inflationary pressures and pandemic-related operational increases further strain budgets (Alberta Council of Disability Services, 2022).

Economic models emphasizing efficiency-based funding may overlook the long-term benefits of workforce development (Sonpal-Valias, 2019). Training investments within health services lack a comprehensive cost-effectiveness analysis (Haldane et al., 2019).

Although online learning may offer scalable and cost-efficient training solutions (Rosenberg, 2006; Giovanis, 2015), adoption requires upfront investment in technology, infrastructure, and digital support systems. Reporting structures within the sector remain fragmented, limiting evidence-based evaluation of workforce initiatives (Halton, 2012; McCoy & Masuch, 2007).

Location: Rural and Urban Variations

Geographic location influences access to professional development. Rural agencies face significant barriers to in-person training due to distance and limited infrastructure (Alberta Council of Disability Services, 2019). Online learning presents opportunities to overcome geographic constraints by expanding participation capacity and reducing travel costs (Ong & Jambulingam, 2016).

However, technological readiness and internet reliability vary across regions. Differences in training models and competency frameworks across jurisdictions further complicate standardization (Laxer et al., 2016; Developmental Services Human Resource Strategy, 2011).

Global care workforce dynamics, including migration patterns and gendered labour structures, also influence training delivery and expectations (Eckenwiler, 2009; Howe et al., 2019; Armstrong et al., 2008; Kidney, 2012; Palmer & Eveline, 2012). These contextual factors shape how learning is designed and implemented across agencies.

Size and Mode of Delivery

Effective online learning strategies require deliberate investment in course development, stakeholder engagement, competency mapping, and learner support systems (Mayeshiba et al., 2018). Embedding structured development programs for newly qualified practitioners strengthens learning integration and completion rates (Erol et al., 2016).

Agencies must allocate protected time for learning and follow-up to ensure transfer of knowledge into practice (Truong et al., 2021). Unlike traditional classroom-based training, online education can accommodate larger audiences without geographic limitations (Ong & Jambulingam, 2016).

Workforce perspectives remain essential in evaluating and improving learning initiatives (Truong et al., 2021).

Education, Innovation, and Continuous Investment

The average annual operating cost of a service-providing agency in Alberta is approximately $8.1 million (Alberta Council of Disability Services, 2019). Agencies frequently report

underfunding and limited flexibility for innovation (Alberta Council of Disability Services, 2020a).

Indirect and administrative costs are often excluded from funding calculations despite their importance in sustaining quality services (Alberta Council of Disability Services, 2020). Resource constraints discourage experimentation with new training models and limit cross-agency knowledge sharing (Choy et al., 2013).

A reluctance among senior management to adopt online learning can hinder integration and reduce completion rates (Wong & Sixl-Daniell, 2015). Developing a knowledge-sharing culture requires cross-agency communication and investment in internal capacity-building at multiple organizational levels (Stylianou & Savva, 2016; Rashid et al., 2017).

Successful online learning implementation requires sustained collaboration and support for research-informed practice (Lai et al., 2017; Gannon-Cook, 2010).

Accreditation, Certification, and Regulatory Pressures

Service-providing agencies must comply with multiple legislative and regulatory frameworks (Clark et al., 2009). Accreditation standards and employer policies, including Occupational Health and Safety legislation and Employment Standards, influence workforce training priorities (Government of Alberta, 2021).

Creating Excellence Together (CET) standards provide a provincial framework for service quality (Alberta Council of Disability Services, 2021). Accreditation audits require documentation of workforce competencies and training compliance (Alberta Council of Disability Services, 2021).

Online learning initiatives aligned with accreditation and regulatory requirements are more likely to receive institutional support (Calder, 2019). However, aligning training with certification standards generates a significant financial burden (Alberta Council of Disability Services, 2022a).

Certification pilot initiatives indicate that collaboration and organizational buy-in are essential for sustainability (Alberta Disability Workers Association, 2019). The accreditation process shapes how knowledge is structured and delivered within agencies (Fesenko et al., 2018).

Despite the central role of accreditation-driven training, limited research evaluates cost-effectiveness or return on investment within the PDD sector (Haldane et al., 2019).

Value Placed on Health and Safety

FLWs experience elevated rates of occupational injury, stress, and exposure to violence (Brill-Ortiz, 2014; Cunningham et al., 2016; Manning, 2005). Education and training reduce the use of restrictive practices and improve outcomes for individuals with intellectual disabilities (Singh et al., 2009; Trollor et al., 2020).

However, training demands compete with staffing shortages and financial constraints (Manning, 2005). Agencies vary in the emphasis placed on ongoing safety training and employee protection.

Without adequate workforce education, agencies may lack the capacity to support individuals with complex needs (Lipsky, 1980; Alberta Council of Disability Services, 2022). Expanding access to untethered learning resources may improve safety outcomes and reduce sector-wide disparities.

Macro-Level Sector Pressures

Online learning in Alberta's PDD sector occurs within broader structural, demographic, and systemic influences that shape how services are provided and the strength of the workforce. These include complex caseloads, health disparities among individuals accessing services (IAS), occupational safety risks, and pandemic-related disruptions.

Complex Caseloads

Caseload complexity within Alberta's PDD sector has intensified. About 14% of people using services are classified as complex or ultra-complex, frequently facing overlapping issues like addiction, homelessness, and involvement in criminal activity (Alberta Council of Disability Services, 2020c).

Demographic and health trends add to the complexity, such as an aging IAS population, more frequent mental health issues, and greater medical complications (Alberta Council of Disability Services, 2020a). Although individuals with developmental disabilities have an average lifespan of 66 years, they frequently experience aging-related symptoms earlier than the general population (Sullivan et al., 2019). Preventive health care is often insufficient and supports may not adequately adjust to evolving needs (Sullivan et al., 2019).

Health disparities among individuals with developmental disabilities are well documented, including disparities in mortality, morbidity, quality of life, and access to care (Krahn et al., 2006; Perry et al., 2010). The World Health Organization (2020) has highlighted that such differences are found worldwide.

Individuals accessing services experience significantly higher rates of mental health challenges compared to the general population (Dosen & Day, 2001; Elliott et al., 2003). Prevalence estimates vary widely, ranging from 7% to 97% (Cooper et al., 2007). The style and extent of support provided by FLWs influence both the mental health outcomes of IAS and the stress experienced by workers (Marshall & Ferris, 2012).

Role ambiguity and tension may arise when FLWs support individuals with complex mental health needs, particularly in the presence of high caseloads and inadequate communication systems (Shepherd & Meehan, 2019). Calls for systemic reform emphasize the need for collaborative, systems-focused approaches rather than short-term solutions (Alberta Council of Disability Services, 2020c).

Complex Caseloads and Online Learning

Research indicates that FLWs without dementia-specific or complex care knowledge exhibit lower expectations for improvement and reduced engagement in supportive practices (Chenoweth et al., 2018). Insufficient training may lead to disengagement, reactive responses to challenging behaviour, and diminished relational support (Chenoweth et al., 2018).

Chenoweth et al. (2018) recommend providing specialised education that focuses on psychosocial support, encourages social interaction, and promotes person-centred choices. However, system-wide adoption of specialized training requires leadership commitment and executive-level support within the PDD sector (Chenoweth et al., 2018).

Health and Safety Risks

Globally, FLWs experience disproportionately high rates of occupational injury and illness (Brill-Ortiz, 2014). Emotional labour and exposure to grief contribute to burnout and emotional

exhaustion (DePasquale et al., 2017). The gendered and often invisible nature of care work obscures workplace hazards and compromises worker health (Kosny & MacEachen, 2009; Cunningham et al., 2016).

Education and staff training are associated with reduced use of restrictive interventions and improved outcomes for individuals with intellectual disabilities (Singh et al., 2009; Trollor et al., 2020). Nevertheless, agencies report limitations in training time, procedural adherence, and staffing capacity (Manning, 2005).

Violence toward workers remains a significant concern within the sector (Manning, 2005). Although Crisis Prevention and Supportive Intervention training is offered, it is still uncertain whether this training lowers injury rates (Manning, 2005). Without adequate training, agencies may be less willing or able to serve individuals with complex needs (Lipsky, 1980; Alberta Council of Disability Services, 2022a).

Untethered access to high-quality training resources may help address disparities in safety education across agencies.

Pandemic Impacts

Workforce shortages within Alberta's PDD sector were critical prior to the COVID-19 pandemic and intensified under crisis conditions (Gibson, 2016). Structural labour market changes intersected with demographic trends, amplifying workforce instability (Cherry, 2019). Skills shortages often remain latent until crisis events expose structural vulnerabilities (Chan et al., 2005).

During the COVID-19 pandemic, inconsistent sector-wide response planning increased exposure risks for individuals with disabilities and the associated workforce (World Health Organization, 2020). Although remote technologies expanded access to assistive tools and alternative supports, barriers related to technology access, digital literacy, and task suitability remained significant (Jashinsky et al., 2021; Vromans et al., 2023).

Multiple job holding among FLWs heightened infection risk and the potential for cross-site transmission (Baughman et al., 2022). Essential workers faced inadequate personal protective equipment, increased workload, fear of infection, and insufficient training (Das et al., 2021). Crisis conditions disproportionately affected unskilled employment sectors (Díaz et al., 2020).

These pandemic-related pressures influenced FLWs' capacity to engage in additional online learning initiatives (Jindra & Jindra, 2019; Närhi & Matthies, 2016).

Synthesis of Macro-Level Forces

Macro-level pressures, including complex caseloads, health disparities, occupational safety risks, and pandemic disruptions, increase the need for targeted workforce education while constraining workers' cognitive, emotional, and temporal capacity to participate in training.

Within a Force Field Analysis framework (Miller, 1967; Lewin, 1997; Laforest, 2011), these systemic conditions represent powerful restraining forces that interact with micro- and meso-level influences. Effective online learning adoption within Alberta's PDD sector requires strategies that reduce pressures that restrain and strengthen driving forces, such as leadership support, accessible technology, structured professional development, and culturally responsive design (Toves et al., 2016; Gotsill & Natchez, 2007).

Conclusion

The literature reviewed in this chapter underscores the complexity and urgency of addressing skills shortages among frontline workers (FLWs) in Alberta's Persons with Developmental Disabilities (PDD) sector. As the sector navigates changing demographic realities, funding constraints, and the ongoing effects of the COVID-19 pandemic, online learning emerges as both a necessity and a challenge. Although online education offers scalable, flexible, and potentially cost-effective solutions, its success depends on a nuanced understanding of the micro-, meso-, and macro-level forces shaping frontline workers' experiences.

At the micro level, factors such as age, gender, education, technological proficiency, and mental health influence engagement with online learning. The literature identifies frontline workers as a structurally vulnerable workforce, often facing barriers related to digital literacy, economic precarity, and work-life balance. These realities are further shaped by the predominance of women in the sector, the presence of visible minorities and immigrants, and the persistence of low wages and high turnover, all of which carry important implications for the design and delivery of effective online learning initiatives.

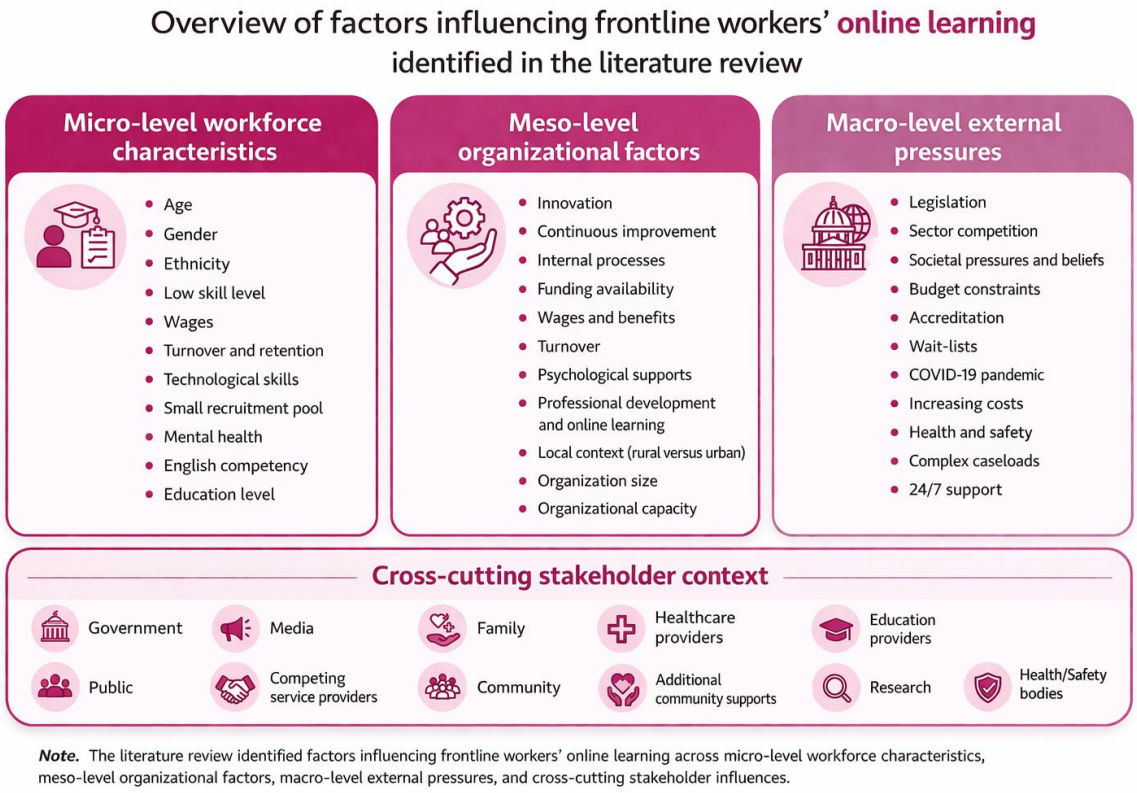
At the meso level, agency size, internal processes, funding models, and organizational culture mediate the accessibility and quality of workforce development opportunities. The literature shows that, although agencies are mandated to provide training, resource constraints and inconsistent leadership support often limit the potential of online learning to support meaningful professional growth. Accreditation requirements and regulatory pressures add further complexity by requiring agencies to balance compliance with innovation and continuous improvement.

At the macro level, sector-wide pressures such as increasing caseload complexity, health and safety risks, and pandemic-related disruptions exert powerful restraining forces on both service delivery and workforce capacity. The literature makes clear that these systemic conditions not only increase the need for targeted, high-quality training but also constrain frontline workers' ability to participate in and benefit from such opportunities.

To synthesize the breadth of factors identified across the literature, **Figure 2** provides an overview of the micro-, meso-, and macro-level influences shaping frontline workers' online learning experiences in Alberta's PDD sector. The figure also highlights cross-cutting stakeholder influences that shape the broader context in which workforce development occurs.

Figure 2

Overview of factors influencing frontline workers' online learning identified in the literature review



Note. The literature review identified factors influencing frontline workers' online learning across micro-level workforce characteristics, meso-level organizational factors, macro-level external pressures, and cross-cutting stakeholder influences. These factors are presented as an overview of the literature and do not represent empirical findings from this study.

As shown in Figure 2 above, the literature does not position these influences as isolated factors. Rather, they are presented as interrelated conditions that collectively shape the context of online learning within the PDD sector. Micro-level workforce characteristics, meso-level organizational conditions, and macro-level external pressures emerge across the literature as

coexisting influences, while stakeholder groups shape expectations, resources, and accountability across these levels. This synthesis supports the multi-level analytical framework adopted in this study.

Force Field Analysis (FFA) provides a valuable theoretical lens for understanding these dynamics by emphasizing that sustainable change requires both the strengthening of driving forces, such as leadership support, accessible technology, and inclusive instructional design, and the reduction of restraining forces, such as funding instability, workload pressures, and digital inequities. The literature suggests that the adoption of online learning in the PDD sector cannot be supported through isolated interventions alone. Instead, it requires a holistic, context-sensitive approach that is responsive to the lived realities of frontline workers and the structural conditions of their work.

In sum, this chapter establishes a strong rationale for research that centres the voices and experiences of frontline workers, examines the interaction of demographic, organizational, and systemic conditions, and applies Force Field Analysis as a framework for understanding online learning within Alberta's PDD sector. The literature reviewed here provides the conceptual and contextual foundation for the empirical investigation that follows and supports the broader aim of informing policy, practice, and future scholarship in the pursuit of a skilled, resilient, and well-supported workforce.

Chapter 3: Research Methodology

Preamble

This chapter outlines the methodology and provides epistemological justification for it. The research questions will be outlined, followed by the research methods used.

First, it is important to situate my own ontological underpinnings and values, which guided the epistemological reasoning for this research.

Through my lived experiences with online education and my work in community and social services, I observed the field's complexities. Witnessing the comorbid prevalence of mental health, medical, and socio-economic barriers and how they impacted the workforce's learning and development, I grew to believe that learning is "messy" and "ever-changing." Though I no longer work within the field, I believe that the strongest educational approaches and research for FLWs in Alberta's PDD sector will provide "spaces for a full engagement with the challenges of understanding teaching and learning as complex processes" (McChesney & Aldridge, 2019). Ontologically, I lean toward pragmatism and the view that learning is malleable and adaptive. Thus, the research process also follows a pragmatic ontology of iterative inquiry, allowing for inductive and deductive reasoning and supporting the inclusion of emerging ideas and data (Kelly & Cordeiro, 2020).

Pragmatic Paradigm

This research was grounded in a pragmatic paradigm because it sought to address a real-world workforce problem and generate practically useful knowledge about frontline workers' online learning experiences in Alberta's PDD sector. Pragmatism was appropriate because the study was concerned less with allegiance to a single method than with selecting the forms of evidence most capable of answering the research questions. In this study, that orientation was especially important because frontline workers' online learning experiences were shaped by interdependent individual, organizational, and sector-wide conditions. A pragmatic stance supported the use of both quantitative and qualitative evidence to examine a complex applied problem in a way that was responsive to practice and capable of informing action (Creswell & Plano Clark, 2018; Hall, 2013; Heinonen & Strandvik, 2022).

Case Study Design

This study employed an exploratory mixed-methods case study design. Case study methodology was appropriate because the research examined a contemporary phenomenon within its real-world context, and the boundaries between the phenomenon and its context were not clearly separable. In this dissertation, the case was the online learning experiences of frontline workers employed within Alberta's community-based PDD service-providing agency context, examined during a period shaped by workforce strain, organizational pressures, and continuing digital transformation following COVID-19. This design aligned with Yin's view of case study research as the study of a contemporary phenomenon in context and with Stake's position that case study is fundamentally a choice of what is to be studied rather than a single method of data collection (Stake, 1995, 2003; Yin, 2018).

Exploratory Mixed-Methods

A mixed-methods design strengthened the case study by enabling the collection of different but complementary forms of evidence about the same case. The quantitative strand identified the distribution, direction, and relative prominence of reported factors influencing online learning experiences. The qualitative strand provided contextual detail regarding how frontline workers described, interpreted, and experienced those factors in practice. In this way, the quantitative data offered breadth, while the qualitative data added depth and descriptive richness. Their integration supported a fuller and more credible understanding of the case than either strand could have provided independently.

This is consistent with mixed methods scholarship, which emphasizes intentional integration of quantitative and qualitative evidence to develop stronger inferences about complex social phenomena (Creswell & Plano Clark, 2018; Mills et al., 2010).

This design was particularly appropriate for two reasons identified in the literature review. First, frontline workers in Alberta's PDD sector represent a workforce shaped by vulnerability, marginalization, and structural disadvantage. A pragmatic mixed-methods case study made it possible to recognize variation in workers' backgrounds, ways of knowing, and workplace realities while still identifying broader patterns across the case. Second, existing workforce development research has tended to focus on service providers, community outcomes, or system performance rather than frontline workers' own perspectives. An exploratory case study created space to investigate how frontline workers themselves experienced online learning within the specific contexts in which they lived and worked. In this sense, pragmatism anchored the study in practical relevance, while the mixed-methods case study design provided the structure needed

to examine the complexity of the case and generate findings capable of informing sectoral practice, policy, and future online learning design (Heinonen & Strandvik, 2022; Kelly & Cordeiro, 2020).

Integration occurred at the levels of design, analysis, and interpretation, with quantitative findings used to identify overall patterns and qualitative findings used to elaborate and contextualize those patterns within the case.

The macro-level factors included within the research were the pandemic, accreditation, health and safety, and complex caseloads. These macro-level factors were included because they affected online education, and the information could provide invaluable insights into the changing climate, if any, of online education amid a worldwide crisis and health and safety concerns within the industry. The research laid the groundwork for intelligent action by identifying macro-level factors shaping online learning, such as legislation and societal beliefs.

Figure 3 presents the micro-, meso-, and macro-level factors incorporated into the survey questions, as derived from the literature review and organized within the force field analysis framework. Included in the research methodology section, this figure identifies the driving and restraining factors that informed the construction of the survey instrument and the examination of frontline workers' online learning experiences in Alberta's PDD sector. The survey also gathered demographic information to better understand the representation and experiences of underrepresented groups identified in the literature.

Figure 3

Micro-, Meso-, and Macro-Level Driving and Restraining Factors Incorporated into the Survey Questions

Note. Figure 3 presents the micro-, meso-, and macro-level factors incorporated into the survey questions, as derived from the literature review and used to structure the survey instrument. The figure is included in the research methodology section to illustrate the categories examined in the survey, not to indicate findings. Demographic variables were also included to support the analysis of representation and the experiences of underrepresented groups.

The micro-level data regarding FLWs who might identify as a person with disabilities themselves was collected. This factor was not highlighted within the literature review, as there was little to no research present in this field. It was included because it was believed it could yield important data on the frontline workforce supporting adults with disabilities. Research highlighted that FLWs who also identified as having a disability "were the most successful because of the credibility that stems from a shared identity" (Whiteman et al., 2016). Literature regarding FLWs with a disability was sparse and situated around legal frameworks and policy domains; there was a need to understand the lived experiences of FLWs with a disability and to

explore opportunities for affirmative and collaborative interventions among frontline workers with disabilities (Spagnuolo et al., 2020). The evaluation of this information helped explore what FLWs needed regarding online education and what they might have been experiencing.

Pragmatism

In social and human research, pragmatism is widely regarded as a strong foundation for mixed-methods inquiry because it allows the researcher to focus on the research problem and to select the methods best suited to addressing it. For this study, pragmatism was especially appropriate because the aim was not only to identify patterns in frontline workers' online learning experiences, but also to understand those experiences as they were lived, interpreted, and shaped within practice. In this sense, pragmatism supported a mixed-methods approach capable of capturing both breadth and depth while remaining attentive to the values and lived experiences of those most directly affected (Green & Carey, 2013). It also aligned with the goal of generating findings that were useful, context-sensitive, and grounded in the realities of Alberta's PDD sector. As Morgan (2007) argues, pragmatism provides a productive basis for combining qualitative and quantitative methods because it shifts attention away from abstract paradigm disputes and toward methodological choices that best address the research question. Kelly and Cordeiro (2020) similarly identify pragmatism as especially valuable in organizational research because of its emphasis on actionable knowledge, experiential inquiry, and context-responsive understanding.

Pragmatism also supported the epistemological position that knowing, experience, and learning are interconnected. This was important for a study focused on frontline workers' online learning experiences, where learning does not occur in isolation but within demanding

organizational, social, and sectoral conditions. A pragmatic case study approach made it possible to acknowledge the depth, complexity, and multiple realities of frontline workers' experiences while still pursuing practical understanding (Mohd Ishak & Abu Bakar, 2014). Rather than treating online learning as a purely technical intervention, pragmatism enabled the research to examine it as a socially situated practice shaped by everyday work, institutional expectations, and broader sector pressures. This orientation also supported the study's interest in producing findings that were meaningful for practice, policy, and organizational improvement. Kelly and Cordeiro (2020) further argue that pragmatism is especially useful in complex organizational settings because it is flexible, context responsive and well-suited to investigating dynamic processes in which people may experience action and change differently.

The pragmatic lens also helped refine the research problem and created space to explore how frontline workers experienced online learning, rather than assuming those experiences could be adequately understood through a single method alone. Pragmatism supported the use of an open-ended survey within a mixed-methods design because it allowed quantitative patterns and qualitative insight to work together in producing a fuller account of the phenomenon under study. This was especially important in a workforce-centred study that sought both descriptive clarity and interpretive understanding. McChesney and Aldridge (2019) emphasize the value of generating rich and contextually situated understandings, a goal that aligns closely with the present study's focus on learning experiences within a specific workforce and sector context. In a directly relevant applied example, Shaw et al. (2010) argue that mixed-methods research grounded in pragmatism is especially valuable in practice settings because it can address multiple practice concerns more effectively than qualitative or quantitative approaches in isolation. That rationale strongly supports the present study, which sought not only to understand

frontline workers' online learning experiences but also to generate findings with practical relevance for the PDD sector.

Overall, pragmatism provided an appropriate philosophical and methodological foundation for this research. It supported the integration of quantitative and qualitative evidence, acknowledged the contextual and socially situated nature of frontline workers' learning experiences, and aligned with the study's aim of producing useful, sector-relevant insight. In this way, pragmatism was not simply compatible with the research design; it strengthened it by allowing the study to remain grounded in both the complexity of the problem and the practical value of the knowledge produced.

Exploratory Research

This research was exploratory, examining the experiences of FLWs with online learning in Alberta's PDD sector, which had not previously been studied. In addition, the data collection process could have been challenging, as identified within the literature review, since FLWs represented a vulnerable, marginalized, and structurally disadvantaged population. Thus, a pragmatic mixed methods approach ontologically supported the researcher's personal beliefs outlined in the preamble to this chapter, recognizing that the learner's lens was filtered through their own experiences. Exploratory research posed questions that deepened understanding of FLWs' lived experiences, ways of knowing, and ways of behaving. Without preconceived notions, the research captured the "present state of affairs" on a topic not previously explored and enhanced the research's usefulness and value (Kelly & Cordeiro, 2020).

Research Questions

To investigate FLW's perceptions of online learning, a mixed-methods survey will be administered. Results from this survey will provide answers to the following research question, and sub-questions will be examined:

1. What were the driving and restraining factors impacting the online education experiences of frontline workers (FLWs) in Alberta's Persons with Developmental Disabilities (PDD) sector?
2. To what extent do the driving and restraining factors impact FLWs' online learning experiences?
    a. How do FLWs perceive the driving and limiting factors impacting their online learning experiences?
3. What insights can be provided by the driving and restraining factors identified towards online learning of frontline workers in the PDD sector in Alberta?
    a. What valuable insights regarding the driving and restraining factors can be gained from an FLW's perspective?

Specific Procedures

Frontline worker behaviour, emotional reactions, beliefs, and feelings had previously been excluded from research and were critical to consider when evaluating educational initiatives (Whittington & Burns, 2005). In addition, the attainments, and challenges of online education for FLWs in Alberta's PDD sector necessitated the integration of rich, descriptive qualitative and quantitative elements. Training and education were consistently identified in the literature as

avenues to directly improve care delivered within the PDD sector (Kelly, 2017). Online education could create avenues for discussion, reduce future costs, increase wages, increase safety, and appease multiple stakeholders (Sheets, 1992).

This pragmatic research explored the contextual factors identified in the literature review within the PDD sector.

The case study approach used both quantitative and qualitative methods to provide a thorough analysis of the data. Qualitative data were vital for exploring how FLWs perceived their online education experiences, as there may not have been a single, clear set of outcomes. The case study's findings aligned with the quantitative and qualitative data collected, providing multiple sources of evidence and measures for each of the FFA factors under evaluation (Yin, 1994).

Defining the Case

It was important to situate this research in time and space, as it examined a caveat in education and training for Alberta's frontline PDD workers during a significant period of need, which could have yielded insights into more accessible training. This research was positioned to examine a salient issue: the inadequate professional development and support for Alberta's Frontline PDD Workers, which had not yet been clearly understood (Timans et al., 2019). Research had not yet examined which driving and restraining factors could jeopardize the efficacy of the sector's online learning efforts in this population, and it was unclear how these factors played a critical role in training and education aimed at the safety of vulnerable individuals accessing services. The case study provided insight into this population's experiences and enhanced awareness of their online learning needs.

The sample population included frontline workers employed in Alberta's PDD by a service-providing agency within the last five years who participated in mandatory online education and training directly related to their positions. Employees in leadership and managerial positions, as well as those taking non-mandatory professional development courses, were excluded from the study.

Research participants completed a semi-structured survey to collect demographic information and capture their experiences with online learning over the past 5 years. Data were collected until it was deemed sufficient to answer the research questions (Neuman, 2009).

This study used a snowball and scaffolded sampling approach to recruit FLWs from PDD service providers in Alberta. Samples were selected using the methods outlined in Table 1.

Table 1

Sampling Techniques (adapted from Mohd Ishak & Abu Bakar, 2014)

Sampling Method	Description
Scaffolded Snowball Technique	Alberta Disability Workers Association is the leading voice for people employed in Alberta's community disability services (Alberta Disability Workers Association, 2022).
	Keep recruiting participants until all necessary information collected represents

	enough individuals for a thorough case study analysis.
Subsequent Sampling	LinkedIn was used to contact individuals in Alberta with suitable job titles.

Data Collection

The mixed-methods survey used for this research is available in Appendix F. During the literature review, careful consideration of Lewin's (1947) Force Field Analysis (FFA) identified possible driving and hindering factors that might have impacted FLWs' online learning experiences. The survey was designed to align with the research questions and to capture the workforce's demographic characteristics, as well as the identified drivers and barriers.

Although substantial data were expected to be gathered through the survey questions, empirical evidence alone may have overlooked the critical voices of FLWs, which were better captured by the survey's open-ended format, which allowed for greater word choice and elaboration. The survey employed open-ended questions to elicit deeper engagement and feedback beyond empirical data. The pragmatic paradigm, aligned with the qualitative components of this mixed-methods study, created opportunities to develop a contextualized understanding of online education, particularly for FLWs.

The demographic information was collected in a multiple-choice format, with space for open-ended answers if the respondent did not identify with any of the options. Each question also allowed respondents to decline to disclose information if they preferred. The demographic

information collected was directly related to the literature review and the demographic considerations that might have affected the online learning experiences of FLWs.

Additional research was conducted to ensure that the demographic questions were consistent with ethical considerations and with recent statistical reports from the Government of Canada. Salary ranges were determined by reviewing ALIS, the Government of Alberta's employment support program, and the service's website to understand the salary ranges (starting, overall, and top wages) of FLW workers in Alberta (Government of Alberta, 2022). Age ranges were developed using data from Alberta's Council of Disability Services (2020) workforce survey and from provincial workforce age data.

The multiple-choice questions also included items aligned with the relevant micro, meso, and macro factors identified in the literature review. Each question provided an opportunity for the respondent to include additional comments through an open-ended question box, enabling further investigation into how each factor might have impacted their online learning experience. This was done to allow respondents to share any important considerations or feedback that might have arisen.

The expandable survey questions aided in attaining additional depth to the following: (1) further details in response to the answers provided within the survey; (2) personalized narratives of FLWs' online learning experiences; (3) comparisons between additional responses of FLWs; and (4) personalized recommendations and insights towards future directions of online learning for FLWs.

The survey used 5-point Likert-scale questions to rate the impact of each factor, ranging from 1 (strong negative impact) to 5 (strong positive impact). The Likert Scale provided a neutral

midpoint. These questions gathered ordinal data on a learner's experience with online learning and examined variables that could have driven or hindered an FLW's overall experience.

The survey concluded with an open-ended question that allowed respondents to share any additional experiences or feedback about their online learning. This provided an opportunity to capture the essential voices of frontline workers in a way that accounted for any additional human, technical, or organizational factors that might have influenced respondents' online learning experiences and that might not have been captured or identified in the survey.

The flow, readability, and functionality of the research survey were assessed during the survey testing stage. The researcher evaluated the survey with the survey creator, and any required changes were made before distribution to the sample.

The survey was distributed to the identified sample to collect quantitative and qualitative data from responses, including any additional information provided by participants. The survey was administered via an electronic survey platform and allowed participants to remain anonymous. A link to the survey was provided and circulated to members of Alberta's Disability Workers Association (ADWA). In addition, FLWs could complete the survey via telephone interview if they wished. This was done to reduce potential tension arising from completing an online survey (e.g., English proficiency, limited technological access, knowledge, etc.). Sequential snowball sampling was used because it was determined that an adequate case study sample could not be obtained solely through ADWA membership outreach. This was done by contacting relevant FLWs directly via LinkedIn and through LinkedIn advertising posts. Given ethical considerations, such as the need for anonymity, it was determined that contacting respondents

directly through service providers or service-providing associations could have been detrimental to respondents.

Data Analysis

Both qualitative and quantitative data were collected to address each research question. As the research was exploratory, the data analysis and knowledge construction processes were inductive. Utilizing a pragmatic approach, the analysis started with a map of questions and then proceeded to analyze the quantitative data first. Analyzing the quantitative data first helped identify factors that might have driven or restrained online education.

The quantitative data were analyzed using means, standard deviations, confidence intervals, simple correlation, multiple regression, and analyses of variance. The quantitative data analysis addressed (a) specific FLW demographics, (b) associations between the demographics and their lived experiences with online education, and (c) differences between FLW demographics and their lived experiences with online education.

Pragmatically, the analysis of qualitative data followed an exploratory approach and proceeded in a manner that made the most sense for the iterative exploration of driving and restraining factors that emerged from the quantitative analysis. This research was intended to proceed in such a way that best led to intelligent action. It was important to acknowledge the role that shorter texts could play in the research; however, the best approach to analyzing the qualitative responses depended on their length and quantity, as well as on whether they could be meaningfully analyzed for potential insights (Robinson, 2022). It was anticipated that responses to the survey might yield deeper exploratory insights into the collected empirical data, and an intentional, recursive, and iterative analysis process for the qualitative data was chosen at that

time to yield the most sensible interpretations of FLWs' perceptions of online learning. If qualitative findings corroborated, clarified, or provided insights into the quantitative findings, a mixed-methods approach enabled this pragmatic identification (McChesney, 2017). Pragmatic inquiry enabled practical, real-world inquiry and the question: "What difference would it make to analyze data in one way rather than another?" (Kelly & Cordeiro, 2020).

Because the research included both qualitative and quantitative data, the integration of the findings led to a broader discussion. This research aimed to relate the highlighted findings that may be of particular significance (McChesney, 2017). The data collected in this mixed-methods approach were genuinely integrated in a mutually informative manner. The data analysis process provided space for the data to iteratively "talk to each other … and the idea was then to construct a negotiated account of what they meant together" (McChesney, 2017).

Table 2

Specific Procedures Overview

Phase 1: Survey Testing	Testing of the survey on the pilot population Quantitative Reliability - ensuring questions are clear and answered consistently by respondents. Refining of survey questions Refining of survey structure
Phase 1: Recruitment	Recruitment of Targeted Population Snowball Working with Associations

	Sequential Sampling: LinkedIn Recruitment and Facebook Groups
Phase 3: Data Collection	Electronic Survey Software (Anonymous responses) Option to schedule a telephone survey call
Phase 4: Data Analysis	Quantitative Analysis: means, standard deviations, confidence intervals, simple correlation, multiple regression, and analyses of variance. Qualitative Analysis will be determined by the best way to represent FLWs' experiences, knowledge, and actions. Depending on the authenticity, consistency, and clarity of responses. Integration of Qualitative and Quantitative Analysis: relate the highlighted findings of significance

The Role of the Researcher

Aligned with the pragmatic perspective, in this case study, the researcher recognized that, as data were explored, important decisions regarding the research were communicated. Table 3, adapted from Cohen et al. (2011), describes the researcher's conscious role in this dissertation.

***Table* 3**

The Role of the Researcher within the Research Methodology (Adapted from Cohen et al., 2011, p. 25).

Case Study Mixed Methods Topic for Consideration	Role of the Researcher for this dissertation
Priority	In this research, both qualitative and quantitative data were analyzed separately before integration, yielding a combined relationship and pattern.
Timing	Qualitative and quantitative data collection were conducted simultaneously within the same survey.
Integration	Each question regarding the online learning experience allowed for expansion and feedback if the participant wished to respond.
Issues	For the collected demographic characteristics, quantitative data were the primary mechanism. Participants could still select “other” and declare an option not provided. Questions related to the research

	question at hand and the research purpose were used to collect qualitative and quantitative data concurrently.
Interaction	The survey was designed to collect qualitative and quantitative data interactively. The statistical score a participant assigned to a survey question could be followed up with a deeper explanation of why they assigned that score.
Intent: Intelligent Action	The research was implemented to identify avenues and provide insights into future online learning for FLWs within the PDD sector. For this reason, the research findings were examined for their meaning and insights for future research.
Scope	Mixed methods occurred within the scope of this single study and this dissertation.
Strands	Numerous drivers of online learning were analyzed using both qualitative and quantitative data.
Methods Characteristics	Qualitative and quantitative methods were used iteratively to address research questions within the mixed-methods case study approach.

Ensuring Research Rigour

When administering qualitative research within human services, it is of "utmost importance that qualitative researchers present and articulate a well-considered strategy for ensuring validity and reliability" (Coleman, 2021). The survey is one such tool to help minimize

threats to validity. It provided a mechanical record of responses and reduced biases that might otherwise occur during an interview. The survey format ensured consistent questions. Administration software allowed for response anonymity. Questions were carefully scripted and reviewed to ensure that service providers or FLWs cannot be identified. The demographic questions in the survey mirrored those asked in Statistics Canada's 2021 Census. The repetition and everyday use of the questions enhanced the survey's internal validity (Government of Canada, 2022). The survey ensured that all participants could access it via the same anonymous link.

Collecting specific data alone, such as the social or demographic characteristics of FLWs, proved intriguing and yielded key considerations for hiring, training, and supervising FLWs (Whiteman et al., 2016). However, a mixed-methods approach within the social sciences also allowed for the complexity of human beings and the "mixed, messy, real world" in which the PDD sector operates (Cohen et al., 2011, p. 26). It is for this reason that this research also honoured subjectivism and values human action as something that:

> … is not seen as a given response to some external stimuli but arises out of the meaning and significance people construct in events. Bringing to bear personal frameworks of beliefs and values that actors have developed over their lives, they subjectively and selectively define situations" (Fu-Lai Yu, 2003, p. 337).

Mixed-methods research, alongside a pragmatic worldview, enabled the collection and positioning of rich data. It enabled the exploration of research that incorporates a mixed, messy world, enhances validity, and offers flexibility in framing online learning as a social practice. It arrived at a dynamic, multifaceted understanding of what that practice looks like. Pragmatic and

targeted data collection strengthened the depth and quality of analysis and guided by the principle of 'intelligent action', the research enhanced online learning and heard the voices of frontline workers while remaining true to the "quality-driven rigours of academic research" (Kelly & Cordeiro, 2020).

Guiding the sampling strategies was the belief that identifying authentic FLWs as respondents would, in turn, yield the most valuable, reliable, and practice-based knowledge. With the support of the industry association for FLWs in Alberta's PDD sector, ethical considerations were embedded into the research process, and the research ensured the sampling spanned a range of perspectives that could, as closely as possible, paint a clear and 'real picture' of the online learning landscape.

Limitations

The survey format did not allow the researcher to confirm the accuracy of their understanding or provide an "opportunity to confirm or correct the interviewer's interpretation of their words" (Coleman, 2021). In addition, this research did not provide respondents with opportunities to validate their responses through follow-up interviews or surveys. However, this research chose to decrease the activity burden on respondents. Additionally, respondents' anonymity was compromised when they had to provide follow-up contact information. It was believed that a reduction in anonymity for the respondents could have threatened the validity of the research, as respondents might have revised responses if they felt the need "to present themselves or their organization in a more favourable light" (Coleman, 2021).

In this study, data were collected exclusively from FLWs, although there were many other relevant stakeholder groups (service providers, families, and government) within the PDD sector.

This pragmatic case study sought to illustrate online learning in a real-life context, where it was unclear which phenomenon might be at play. The case study approach enabled the research to capture the voice of the FLW, a voice often forgotten in current literature. The survey methodology allowed for the research questions to identify the who (FLWs), what (online learning), when (last five years), where (Alberta), and how many/much (demographic identifiers) without requiring strict control over behavioral events, such as the type of online learning modules taken, the learning provider, or the length of the courses.

The research sought to examine a sequence of learning events over time, to describe FLWs as a subculture, and to explore key phenomena that may or may not have affected their online learning experiences (Yin, 1994). The research questions examined the prevalence of micro, meso, and macro factors and predicted their impact as drivers or restraints within an FFA framework. The research highlighted the "how" or "why" of "a contemporary set of events over which the investigator has little or no control" (Yin, 1994). Although the research may not have demonstrated sufficient rigour to inform policy, the findings could make a meaningful contribution to the body of knowledge on online education in the PDD sector.

Ethical considerations

The ethical considerations of this research adhered to Athabasca University's Research Ethics Board (REB) approval process and were approved before data collection. The researcher also completed the CORE (Course on Research Ethics) Tutorial (Government of Canada, 2016). The REB approval certification is dated and included in Appendix C. The CORE certificate of completion dated July 27, 2022, is included in Appendix D. The submission procedures from Athabasca University guidelines for research involving human participants contain the following

ethical elements: (1) respect for persons, (2) concern for welfare, and (3) justice (Athabasca University, 2018).

Respect for Persons

Respect for persons recognized the intrinsic value of each individual and considered their autonomy. All research participants had the choice to participate. All participation was voluntary, and participants received clear information outlining the research's risks and potential benefits (Government of Canada, 2016). In addition, respect for persons was ensured by maintaining anonymity during data collection. At no time was identifying information (name, address, job title, etc.) collected, and all information was collected as anonymous information, meaning "the information never had identifiers associated with it (e.g., anonymous surveys) and risk of identification of individuals was low or very low" (Government of Canada, 2016).

In this mixed-methods study, participants were informed about what they were being asked to do, why, and how the findings would be used. They were informed that they could withdraw from the survey at any time and terminate it at any point during completion. For the online survey, the first question confirmed informed consent and the participant's agreement to participate. All informed consent forms were kept on file and destroyed after 5 years.

Concern for Welfare

The concern for the welfare of the participants in the research was evident in the careful consideration of unnecessary risks, their potential impact, and in ensuring participants were not exposed to them. The consideration of the physical, mental, and spiritual health of participants, as well as their physical, economic, and social circumstances, was evident through clear

communication regarding the potential impacts of this research in all research instruments and subject recruitment documents, data storage, participant time, and the use of data results (Government of Canada, 2016).

Research participants, their communities, their workplaces, and the PDD sector were not exposed to potential risks arising from data collection and analysis related to culture, values, and beliefs, or to the social and economic circumstances of the individuals recruited for participation (Government of Canada, 2016). My commitment to reflexivity and data-gathering strategies was informed by consideration of the potential impact of the research.

If anonymity were not provided, the participant would not have felt comfortable speaking truthfully about their experiences, as this could have had negative repercussions for the respondent, their colleagues, and even the service-providing agency. Anonymity was of high importance in this research, as was creating a safe and secure online environment in which one could be open, speak one's truth, and respond or not respond as one felt fit.

The research design proactively avoided, eliminated, and minimized risks in several ways. For example, rather than completing in-person or workplace-distributed surveys, participants could access them online in a comfortable environment of their choosing. In respect of the participant's time, quantitative and qualitative data were collected within the same survey, and participants could access the survey anytime, save their progress, and submit the survey when they felt comfortable.

The same approach was adopted to avoid, eliminate, or minimize risks to groups or communities to which participants belonged. For example, to avoid stigmatizing a community,

the research design proposed measures to prevent the identification of service providers or FLWs in the dissemination of research results.

Justice

The ethical considerations in place to ensure that all groups and communities were treated fairly and equitably, and classified as justice, involved considering my participant group and developing a strong rationale for who was included and excluded from the research. The inclusion of FLWs in this research was motivated by the observation that the literature often fails to consider the workforce's perspective when discussing skills shortages, instead focusing on the broader impacts on service providers or on community service delivery.

The exclusion of those in supervisory roles or of those who participated in online learning unrelated to their roles also aligned with the goals of this research. Those in supervisory positions often held different job titles, completed different tasks, earned higher compensation, experienced lower turnover, and held higher levels of education (Alberta Council of Disability Services, 2020). Education and training received outside the PDD sector may not have reflected the same conditions as those provided to workers to directly equip them with the competencies and skills required for an FLW role. This research aimed to ensure that the participant population fully reflected the target population under study.

Although FLWs might have been a more difficult target population to sample, as many did not have direct email addresses or contact information, as opposed to supervisors or leaders within service-providing agencies, practicality or convenience was not a valid reason to choose another participant population to survey. As the research was intended to explore the experiences

of FLWs, participants were recruited to represent the full range of members of that community (i.e., across conditions such as age, sex, gender, and socioeconomic contexts) (Government of Canada, 2016).

Justice also considered potential discrepancies regarding which participants might have been exposed to risk and those who could have experienced the possible benefits (Government of Canada, 2016). The research design avoided the potential for direct or indirect coercion. The invitation to participate was not forwarded through an industry association or a service-providing agency, which could quite possibly have been a supervisor. An email forwarded from another source might have led participants to feel they needed to participate. It was made clear that participation was entirely voluntary, that recruitment did not involve service providers or associations representing them, and that they had no access to the survey results or knowledge of whether the survey was completed. In addition, it was made clear that this research had no sponsors and received no outside funding and that there were no conflicts of interest with any industry associations, service providers, or other stakeholder groups.

Timelines

The supervisory committee approved the following timeline, and the research followed four phases.

Phase 1: Pilot Survey

The first phase of piloting the research survey to ensure quality and functionality required a survey designer versed in mixed-methods research and experienced in building similar surveys

for research participants. The survey designer was recruited, feedback was collected, and necessary changes were integrated.

Phase 2: Recruitment

The recruitment process, including contacting and garnering support for disseminating the research to the industry association (ADWA) and deploying the survey, took approximately 3 months. The 3-month period was sufficient for snowball sampling, such as creating LinkedIn posts and encouraging participants to share the link with their colleagues as a final step when completing the survey.

Phase 3: Data Collection and Analysis

The timeline allowed participants to complete the surveys. The focus of this research is to explore online education within Alberta's PDD sector, and the primary purpose of recruiting participants is to collect specific cases that can clarify or deepen this understanding (Mohd Ishak & Abu Bakar, 2014).

The case study approach to this research recognized that a representative sample or an agreed-upon quota of submissions was neither realistic nor required, and it allowed flexibility to collect additional responses through sequential sampling or to declare the submissions adequate at any time during the collection period. Since this field of study is relatively unexplored and the literature is limited, particularly from the perspective of an FLW, the goal was to recruit participants to enrich the initial understanding of the phenomena rather than to obtain a representative sample of the broader population (Mohd Ishak & Abu Bakar, 2014).

Phase 4: Data Analysis

Data analysis and the corresponding defence of this research were conducted immediately after the survey submissions were closed. It was estimated that this took place over 3 months.

Chapter Summary

Chapter 3 has outlined the methodology and the research design rigour that provided valuable, reliable, and meaningful insights into the quality of online learning for FLWs in Alberta. A case study approach to mixed-methods research, alongside a pragmatic worldview, situated this research.

The literature review identified characteristics of FLWs that could have hindered or helped their experiences with online education. The research also considered that these same factors could both help and hinder FLWs' participation. Overall, the research aimed to “improve our interpretation of reality, rather than seeking a definitive, finished truth” (Cruickshank, 2003). The study investigated the drivers and barriers affecting learning for FLWs; therefore, the study's design accounted for these factors by ensuring accessible, time-efficient data collection and space for participants’ voices to be heard.

The four-phase procedure (survey creation, recruitment, data collection, and data analysis) and the simultaneous, anonymous collection of quantitative and qualitative data supported the rationale for a survey format.

The ethical considerations of this study included anonymity, inclusion and exclusion, informed consent, and the avoidance of direct or indirect coercion to participate.

The sample population and the case study sampling approach (snowball and sequential sampling) were discussed, along with the instrumentation and data collection procedures. As a researcher, I clearly defined my role within the research.

Within a mixed-methods case study approach, the depth and multiple realities of this research were celebrated. With a pragmatic view of knowledge as fluid, human-centred, and socially constructed, this research focused on FLWs' perceptions of their online learning context.

Chapter 4: Findings

Chapter 4 presents the quantitative and qualitative findings related to frontline workers' online learning experiences in Alberta's Persons with Developmental Disabilities (PDD) sector. The chapter reports the factors participants identified in relation to their online learning experiences through both scaled survey responses and optional open-ended comments. Quantitative findings are presented as reported response patterns, and qualitative findings are presented as participant descriptions grouped thematically. Only those factors reported by participants in relation to online learning experiences are included. The findings are organized according to the micro-, meso-, and macro-level framework guiding this study.

Procedure

A mixed-methods survey was administered to 103 frontline workers in Alberta's PDD sector, including demographic items, Likert-scale measures, and optional open-ended responses. The Alberta Disability Workers Association supported participant recruitment, which was further expanded through word-of-mouth and targeted outreach on LinkedIn, resulting in a participant pool that exceeded initial expectations. This snowball sampling approach extended recruitment beyond the association's immediate network and supported broader outreach to potential participants (Leighton et al., 2021). It is essential to acknowledge that all survey questions were optional; consequently, although 103 individuals participated, the response counts vary by question. Thus, the number of respondents for each factor is indicated below.

Frontline workers in Alberta's Persons with Developmental Disabilities sector can be situated occupationally within the broader National Occupational Classification category of social and community service workers (NOC 42201), which includes roles such as community service

worker, developmental service worker, and group home worker. In Alberta, the occupation of Community Disability Services Practitioner is likewise mapped by ALIS, formerly the Alberta Learning Information Service, to this broader NOC group, although ALIS reports labour market data for the occupational category as a whole rather than for the PDD sector specifically. It is important to distinguish occupational classification data from sector-specific workforce estimates.

Within Alberta's PDD system, supports may be delivered through community service providers, Family Managed Services, or government-operated services, meaning that not all PDD-funded support occurs through service-providing agencies. However, Alberta data indicate that the community provider model is the dominant service-delivery approach: in 2020/2021, 10,670 of 12,578 Albertans receiving PDD supports (85%) were served by community disability service providers. ACDS further estimates that the community disability services sector employs approximately 15,000 workers, and that 89% of that workforce is in frontline direct service positions, indicating a large but highly specialized frontline workforce within the provider-based sector. In this context, a study-specific sample of 103 frontline workers is meaningful for an exploratory study, particularly given the dispersed, shift-based, and high-turnover nature of this workforce. This is further underscored by Alberta disability-sector survey work conducted by ADWA, whose 2018 PDD Review Survey obtained responses from 77 workers overall, of whom only 28 identified as frontline workers, highlighting the difficulty of obtaining worker-centred data in this field.

Although an exact public denominator for frontline workers employed specifically within provider-based PDD services is not reported, the available occupational, sectoral, and service-

delivery data indicate that this is a specialized and difficult-to-access workforce, making a sample of 103 frontline workers meaningful for an exploratory study.

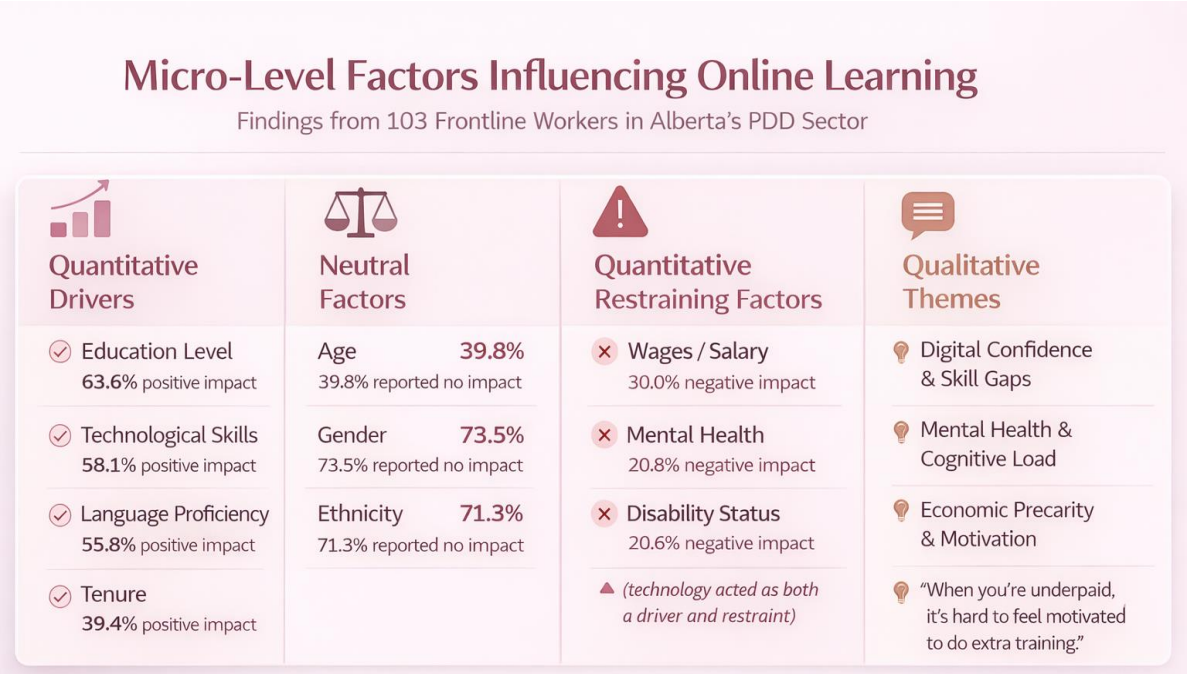
This chapter focuses on the factors participants reported in relation to their online learning experiences. The quantitative and qualitative findings are organized and presented at three levels—micro, meso, and macro—in alignment with the framework outlined in the literature review. These levels are presented separately for clarity, although the reported factors did not appear fully independent across participants' accounts. Table 5 provides a summary of the findings presented in this chapter and prepares the ground for the more explicit cross-level discussion presented in Chapter 5.

Micro-Level Findings

To provide a visual summary of the micro-level findings, Figure 4 presents the principal quantitative drivers, neutral factors, restraining factors, and qualitative themes influencing online learning experiences among frontline workers in Alberta's PDD sector.

Figure 4

Micro-Level Factors Influencing Online Learning Experiences Among Frontline Workers in Alberta's PDD Sector



Note. This figure summarizes the principal micro-level findings from 103 frontline workers in Alberta's Persons with Developmental Disabilities sector. It presents key quantitative drivers, neutral factors, and restraining factors, alongside qualitative themes that contextualize how frontline workers experienced online learning. Percentages shown in the figure are rounded for visual presentation. Detailed variable-level results are reported in Appendix A, Table A1.

Meso-Level Findings

To provide a visual summary of the meso-level findings, Figure 5 presents the principal quantitative supportive factors, mixed organizational factors, restraining factors, and qualitative themes influencing online learning experiences among frontline workers in Alberta's PDD sector.

Figure 5

Meso-Level Factors Influencing Online Learning Experiences Among Frontline Workers in Alberta's PDD Sector

Note. This figure summarizes the principal meso-level findings from 103 frontline workers in Alberta's Persons with Developmental Disabilities sector. It presents key quantitative supportive factors, mixed organizational factors, and restraining factors, alongside qualitative themes reported by participants in relation to online learning experiences. Percentages shown in the figure are rounded for visual presentation. Detailed variable-level results are reported in Appendix B, Table B1.

Meso-Level Quantitative Factors

Meso-level quantitative findings showed that frontline workers' online learning experiences were influenced by a range of organizational conditions, with some factors more commonly reported as supportive and others reflecting more mixed patterns.

Among the 70 respondents who addressed innovation and continuous improvement, a majority (61.43%; *n* = 43) reported a positive or strong positive impact, whereas 10.00% (*n* = 7) reported a negative or strong negative impact (see Appendix B, Table B1).

Internal processes reflected a more mixed pattern. Of the 69 respondents who addressed this variable, 40.58% (*n* = 28) reported a positive or strong positive impact, while 20.29% (*n* = 14) reported a negative or strong negative impact (see Appendix B, Table B1).

Funding availability also reflected a mixed distribution. Among the 67 respondents who evaluated this factor, 29.85% (*n* = 20) reported a positive or strong positive impact, while 25.37% (*n* = 17) reported a negative or strong negative impact (see Appendix B, Table B1).

Professional development support was more commonly reported as a supportive organizational factor. Of the 68 respondents who addressed this item, a majority (57.36%; *n* = 39) reported a positive or strong positive impact, whereas 7.35% (*n* = 5) reported a negative or strong negative impact (see Appendix B, Table B1).

The delivery model was more commonly associated with positive or strong positive responses. Among the 67 respondents who evaluated this variable, 59.71% (*n* = 40) reported a positive or strong positive impact, whereas 7.46% (*n* = 5) reported a negative or strong negative impact (see Appendix B, Table B1).

Overall, the meso-level quantitative findings showed variation in how organizational factors were reported. Innovation and continuous improvement, professional development support, and delivery model were more commonly reported as supportive factors, whereas internal processes and funding availability reflected more mixed responses.

Meso-Level Qualitative Factors

The qualitative findings added contextual detail to the quantitative results by showing how frontline workers described organizational conditions related to their online learning experiences. Three themes were especially prominent: leadership support and organizational culture, time allocation and workload pressures, and practical relevance of content.

Leadership Support and Organizational Culture

Participants emphasized the importance of managerial encouragement and broader agency culture in shaping their experiences of online learning. One participant stated, “When leadership values training, we feel supported to take it seriously.” Another observed, “Some agencies say training matters, but don’t give time to complete it.”

These qualitative responses aligned with the quantitative pattern in which innovation and continuous improvement, as well as professional development support, were more commonly reported as supportive organizational factors.

Time Allocation and Workload Pressures

Participants also described heavy caseloads, staffing shortages, and limited time as barriers to completing training. One participant noted, “There’s no coverage to step away and do courses.” Another stated, “Training is expected but not built into our schedule.”

These responses were grouped under the theme of the time allocation and workload pressures. These qualitative responses were consistent with the quantitative findings showing

that internal processes and funding availability reflected more mixed experiences, including reported negative impacts.

Practical Relevance of Content

Participants valued training that was directly connected to their work and applicable to real-life caregiving situations. As one participant explained, “Training that reflects real-life caregiving situations is the most helpful.” Another commented, “If it connects to what I actually do, I’ll engage.”

These responses were grouped under the theme of the practical relevance of content. These qualitative responses were consistent with the quantitative findings showing that delivery model was more commonly reported as a supportive organizational factor.

Summary of Meso-Level Findings

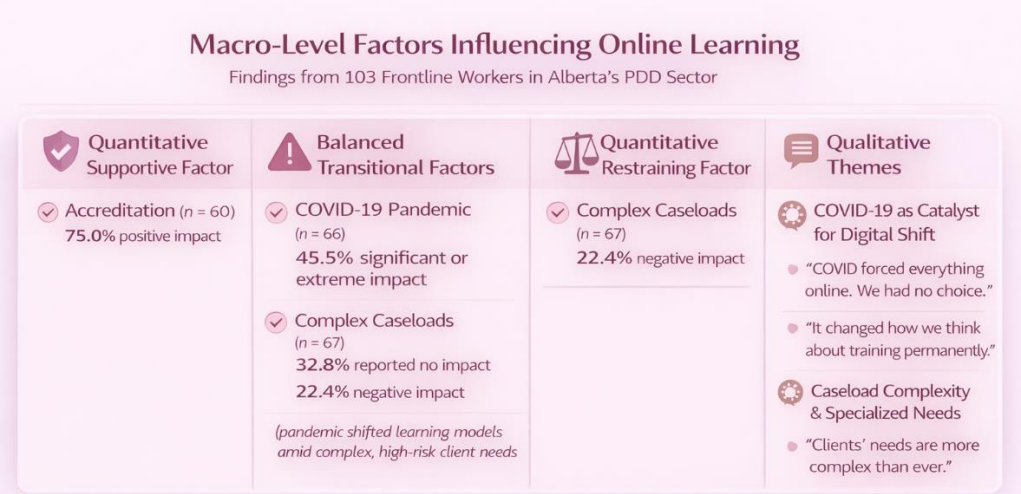
Overall, the meso-level findings showed that online learning experiences were reported in relation to organizational conditions and agency-level supports. Innovation and continuous improvement, professional development support, and delivery model were more commonly reported as supportive factors, whereas internal processes and funding availability reflected more mixed responses. The qualitative findings identified leadership support and organizational culture, time allocation and workload pressures, and practical relevance of content as prominent themes in participants’ descriptions of their online learning experiences, and these themes aligned with the quantitative patterns reported at the meso level. These findings were reported at the organizational level, but they also appeared alongside broader system conditions and individual worker experiences described elsewhere in the chapter.

Macro-Level Findings

To provide a visual summary of the macro-level findings, Figure 6 presents the principal quantitative supportive factors, transitional factors, restraining factors, and qualitative themes influencing online learning experiences among frontline workers in Alberta's PDD sector.

Figure 6

Macro-Level Factors Influencing Online Learning Experiences Among Frontline Workers in Alberta's PDD Sector



Note. This figure summarizes the principal macro-level findings from 103 frontline workers in Alberta's Persons with Developmental Disabilities sector. It presents key quantitative supportive factors, transitional factors, and restraining factors, alongside qualitative themes reported by participants in relation to online learning experiences. Percentages shown in the figure are rounded for visual presentation. Detailed variable-level results are reported in Appendix C, Table C1.

Macro-Level Quantitative Factors

Macro-level quantitative findings showed that frontline workers' online learning experiences were influenced by broader system-level conditions, with some factors more commonly reported as supportive and others reflecting more mixed or constraining patterns.

Among the 60 respondents, accreditation was more commonly associated with positive or strong positive responses. (75.00%; $n = 45$) reported a positive or strong positive effect. No respondents reported a negative or strong negative effect (see Appendix C, Table C1).

The COVID-19 pandemic reflected a substantial system-level impact. Of the 66 respondents who addressed this factor, 45.46% ($n = 30$) reported that it had a significant or extreme impact on their online learning experiences (see Appendix C, Table C1).

Complex caseloads reflected a more mixed pattern. Among the 67 respondents who evaluated this factor, a plurality (32.84%; $n = 22$) reported no impact. However, 22.39% ($n = 15$) reported a negative or strong negative effect (see Appendix C, Table C1).

Overall, the macro-level quantitative findings showed variation in how broader system-level factors were reported. Accreditation was more commonly reported as a supportive factor, whereas the COVID-19 pandemic and complex caseloads reflected substantial impact and more mixed responses.

Macro-Level Qualitative Factors

The qualitative findings added contextual detail to the quantitative results by showing how frontline workers described broader system-level conditions related to their online learning

experiences. Two themes were especially prominent: COVID-19 as a catalyst for digital shift and caseload complexity and specialized needs.

COVID-19 as a Catalyst for Digital Shift

Many respondents described the pandemic as accelerating the adoption of online learning. One participant stated, “COVID forced everything online. We had no choice.” Another observed, “It changed how we think about training permanently.”

These responses were grouped under the theme of COVID-19 as a catalyst for digital shift. These qualitative responses were consistent with the quantitative finding that the COVID-19 pandemic was reported as having a significant or extreme impact by a substantial proportion of respondents.

In this sense, the pandemic made visible a **solution–burden paradox**: the rapid expansion of online learning addressed urgent training needs while simultaneously increasing the burden of learning under already strained workforce conditions.

Caseload Complexity and Specialized Needs

Respondents also described increasing client complexity, specialized support requirements, and limited time for training. One participant noted, “Clients’ needs are more complex than ever.” Another stated, “We need more specialized training, but time is limited.”

These responses were grouped under the theme of caseload complexity and specialized needs. These qualitative responses were consistent with the quantitative findings showing that complex caseloads reflected a more mixed pattern, including notable reports of negative impact.

Summary of Macro-Level Findings

Overall, the macro-level findings showed that online learning experiences were reported in relation to broader system-level conditions. Accreditation was more commonly reported as a supportive factor, whereas the COVID-19 pandemic and complex caseloads reflected substantial impact and more mixed responses. The qualitative findings identified COVID-19 as a catalyst for digital shift and caseload complexity and specialized needs as prominent themes in participants' descriptions of their online learning experiences, and these themes aligned with the quantitative patterns reported at the macro level. Reported at the system level, these findings also formed part of the broader conditions within which organizational and individual experiences of online learning were described throughout the chapter.

Chapter 4 Summary

The following summary table synthesizes the principal quantitative and qualitative findings presented in Chapter 4 across the micro-, meso-, and macro-level framework used in this study. It provides a descriptive overview of the factors participants reported in relation to online learning experiences among frontline workers in Alberta's PDD sector. Each entry identifies the level at which the factor was reported, the key quantitative pattern associated with that factor, and the corresponding qualitative themes reported by participants. Table 5 is intended as a descriptive summary of the Chapter 4 findings rather than as an integrated analysis of relationships across levels. In this way, it consolidates the findings presented in this chapter and prepares the ground for the more explicit discussion of cross-level relationships in Chapter 5.

Table 4

Summary of Micro-, Meso-, and Macro-Level Factors Influencing Online Learning Experiences

Factor	Level	Key Quantitative Evidence	Corresponding Qualitative Themes
Disability Status	Micro	20.59% reported a negative or strong negative impact; 39.71% reported no impact	Cognitive fatigue, reading challenges, endurance barriers
Mental Health	Micro	20.83% reported a negative or strong negative impact; 44.44% reported no impact	Emotional exhaustion, cognitive load, competing demands
Education Level	Micro	63.64% reported a positive or strong positive impact	Confidence, prior preparation, skill transfer
Technological Skills	Micro	58.11% reported a positive or strong positive impact; 20.27% reported a negative or strong negative impact	Digital confidence, skill gaps, frustration, avoidance
Wages and Salary	Micro	30.00% reported a negative or strong negative impact; 50.00% reported no impact	Financial strain, low motivation, unpaid training burden
Innovation and Continuous Improvement	Meso	61.43% reported a positive or strong positive impact; 10.00% reported a negative or strong negative impact	Leadership support, organizational culture, encouragement
Internal Processes	Meso	40.58% reported a positive or strong positive impact; 20.29% reported a negative or strong negative impact	Coordination barriers, scheduling issues, workload pressures
Funding Availability	Meso	29.85% reported a positive or strong positive impact; 25.37% reported a negative or strong negative impact	Uneven access, limited support, resource constraints
Professional Development Support	Meso	57.36% reported a positive or strong positive impact; 7.35% reported a negative or strong negative impact	Managerial encouragement, institutional support
Delivery Model	Meso	59.71% reported a positive or strong positive impact; 7.46% reported a negative or strong negative impact	Practical relevance, accessibility, work-related applicability
Accreditation	Macro	75.00% reported a positive or strong positive impact; 0.00% reported a negative impact	Standards emphasis, accountability, training priority
COVID-19 Pandemic	Macro	45.46% reported a high or very high impact	Rapid digital shift, normalization of online learning
Complex Caseloads	Macro	32.84% reported no impact; 22.39% reported a negative or strong negative impact	Caseload complexity, specialized needs, limited training time

Taken together, the findings presented in this chapter show that participants reported factors at the micro, meso, and macro levels in relation to their online learning experiences. Macro-level factors included accreditation, the COVID-19 pandemic, and complex caseloads. Meso-level factors included funding availability, internal processes, professional development support, and delivery model. Micro-level factors included digital confidence, mental health, cognitive load, financial strain, and perceived readiness to engage in online learning. Although the findings have been presented by level for clarity, the reported patterns across these levels did not appear fully independent and provide the basis for the more explicit cross-level discussion presented in Chapter 5 through the lens of Force Field Analysis.

Chapter 5: Discussion

Chapter 4 presented the empirical findings derived from the mixed-methods survey administered to frontline workers (FLWs) in Alberta's Persons with Developmental Disabilities (PDD) sector. Chapter 5 interprets those findings through Lewin's (1947) Force Field Analysis (FFA) and situates them within the scholarly themes identified in Chapter 2. As established in the literature review, workforce skill shortages (Dawson et al., 2021), the intensification of online delivery during COVID-19 (World Health Organization, 2020), and the need for learner-centered workplace education (Pelster et al., 2016; Żur & Friedl, 2021) formed the context in which FLWs experienced online learning.

Where Chapter 4 reported findings by micro-, meso-, and macro-level categories for clarity, this chapter moves from categorized factors to field dynamics. More specifically, it examines how structural pressures, organizational conditions, and individual capacities interacted, reinforced one another, and at times operated in tension. In this sense, the chapter addresses the research

questions not only by interpreting the identified forces but also by showing how those forces shaped online learning experiences across levels rather than as isolated variables.

Interacting Forces Across the Field

While Chapter 4 organised the findings by micro-, meso-, and macro-level groups, it was evident that the influences affecting frontline workers' online learning were interconnected rather than isolated. Rather, the data indicates that workers' learning experiences were reported across interacting systems, organizational, and individual conditions. In Lewin's (1947) terms, the field was not composed of isolated variables but of coexisting forces whose relative configuration shaped the possibilities for participation in online learning.

At the macro level, accreditation expectations, the COVID-19 pandemic, and increasing caseload complexity established the broader structural conditions within which online learning occurred. These wider pressures were mediated through meso-level organizational realities such as funding availability, internal processes, professional development support, leadership culture, and delivery models. Those organizational conditions, in turn, shaped micro-level experiences of digital confidence, mental health and cognitive load, financial strain, and perceived readiness to engage in online learning. Macro-level pressures became consequential for learning because they were translated through organizations and then encountered in workers' daily realities.

The findings also suggest that the same force could operate as both enabling and restraining, depending on surrounding conditions. Online delivery, for example, increased accessibility, flexibility, and standardization for some workers and agencies. At the same time, when introduced into contexts marked by fatigue, limited protected time, low digital confidence, or inadequate organizational support, the same online formats became additional burdens. This

dynamic reflects a central implication of Force Field Analysis: what matters is not merely whether a factor is present, but how it interacts with other forces in the field.

This dynamic may be understood as a **solution–burden paradox** within workforce online learning. In the present study, online learning was often introduced as a solution to sector pressures because it offered flexibility, accessibility, and scalable delivery. Yet those same features could become burdens when workers encountered them in contexts marked by fatigue, workload strain, limited protected time, uneven digital confidence, or insufficient organizational support. The issue was not simply whether online learning was available, but whether the surrounding field enabled that solution to function as intended.

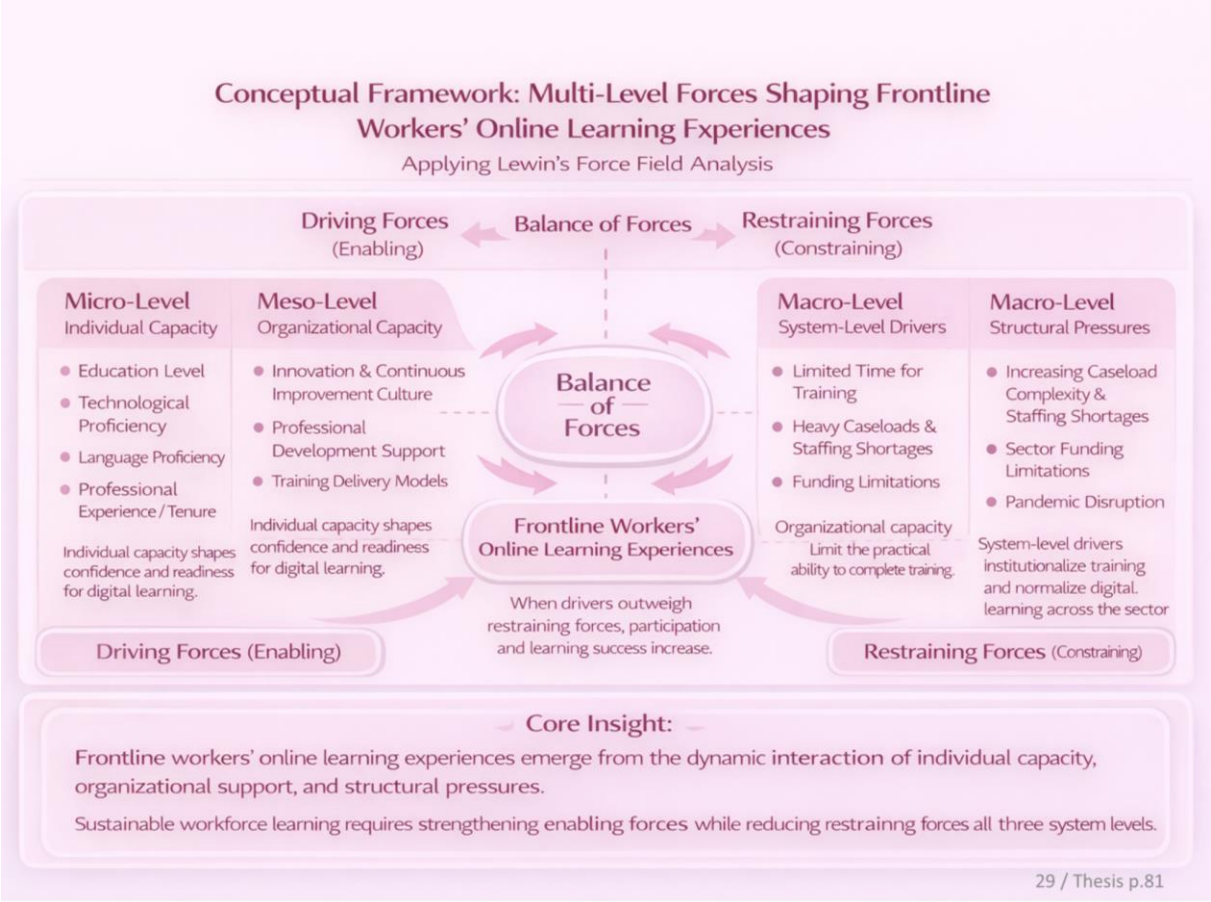
Three cross-level chains were especially visible in the findings. First, accreditation and compliance expectations increased pressure for training at the macro level; this pressure was then mediated by meso-level agency support, internal coordination, and protected learning time; frontline workers experienced the result as either support or overload at the micro level. Second, the COVID-19 pandemic accelerated digital adoption at the macro level, increased reliance on online delivery at the meso level, and then produced uneven micro-level experiences depending on workers' digital confidence, emotional capacity, and available support. Third, sector-wide funding and workload pressures shaped agency-level learning structures, which in turn affected whether workers experienced training as accessible, relevant, and feasible or as one more demand added to an already strained work environment.

Taken together, these patterns indicate that frontline workers' online learning experiences were system-shaped rather than merely individual. The field was constituted by interacting forces that could reinforce one another, counterbalance one another, or intensify tension across

levels (Figure 7). It is this push-and-pull dynamic, rather than the isolated presence of single factors, that most fully realizes Lewin's Force Field Analysis in the present study.

Figure 7

Conceptual Framework: Multi-Level Forces Shaping Frontline Workers' Online Learning Experiences Through Lewin's Force Field Analysis.



Note. This figure provides an integrative interpretation of the study findings. It illustrates how micro-level individual capacity, meso-level organizational capacity, and macro-level structural pressures interact across the field of frontline workers' online learning experiences.

Theoretical Framing: Realizing Lewin's Force Field Analysis Across Levels

Lewin's (1947) Force Field Analysis conceptualizes change as the result of the interaction of driving and restraining forces. While originally developed within organizational change theory, the framework is also well-suited to workforce-based online learning environments because it allows the researcher to examine how competing forces are configured within a real-world field. In the present study, macro pressures such as accreditation expectations, pandemic-driven digital shifts, and increasing caseload complexity intersected with meso-level organizational cultures and micro-level individual capacities. The findings reinforce Lewin's premise that behaviour emerges from the relative balance of forces rather than from any single cause.

Importantly, the present study extends the use of Force Field Analysis beyond classification alone. Chapter 4 identified drivers, mixed patterns, and restraining forces by level. Chapter 5 shows that these forces did not remain fixed within those categories. Instead, they interacted across levels, with some forces buffering wider pressures and others amplifying them. In this way, the field was characterized not only by support and resistance but also by tension, contradiction, and conditionality.

Micro-Level Analysis: Individual Capacity Within a Wider Field

Although micro-level factors were reported as individual experiences, they did not appear independent of the organizational and structural conditions surrounding workers. Rather, the findings suggest that individual capacity was experienced within a broader field shaped by agency supports, sector pressures, and the practical conditions under which online learning was delivered.

Consistent with the literature review's emphasis on learner-centered and workforce-responsive models (Pelster et al., 2016), education level and technological proficiency emerged as strong drivers at the micro level. The literature identified digital competence and prior educational attainment as foundational elements influencing online learning experiences (Morin et al., 2019; Żur & Friedl, 2021). The findings of this study reinforce that position. Respondents with higher levels of education reported more positive online learning experiences, and many participants identified technological skills as having a positive or strong positive impact. These findings suggest that educational capital and digital fluency functioned as enabling conditions within workplace online learning environments.

At the same time, the literature also cautioned that disparities in digital literacy and access shape learning outcomes (Koller et al., 2022; Morin et al., 2019). The qualitative findings mirrored this complexity. Participants described technological competence as empowering when present, but overwhelming when absent. As one respondent explained, "When I feel comfortable using the technology, I'm more likely to finish the training. When it's confusing, I give up." Another stated, "Some of us didn't grow up with this technology. It's overwhelming." These responses show how digital skills could function as both driver and restraint depending on surrounding conditions.

Mental health strain, workload burden, and financial instability further reflected the structural skill shortage crisis described in the literature (Dawson et al., 2021; Alberta Council of Disability Services, 2022b). A meaningful proportion of respondents identified mental health challenges and workload pressures as restraining forces. Qualitative comments emphasized cognitive fatigue and limited capacity, with participants noting, "After a full shift, I don't have

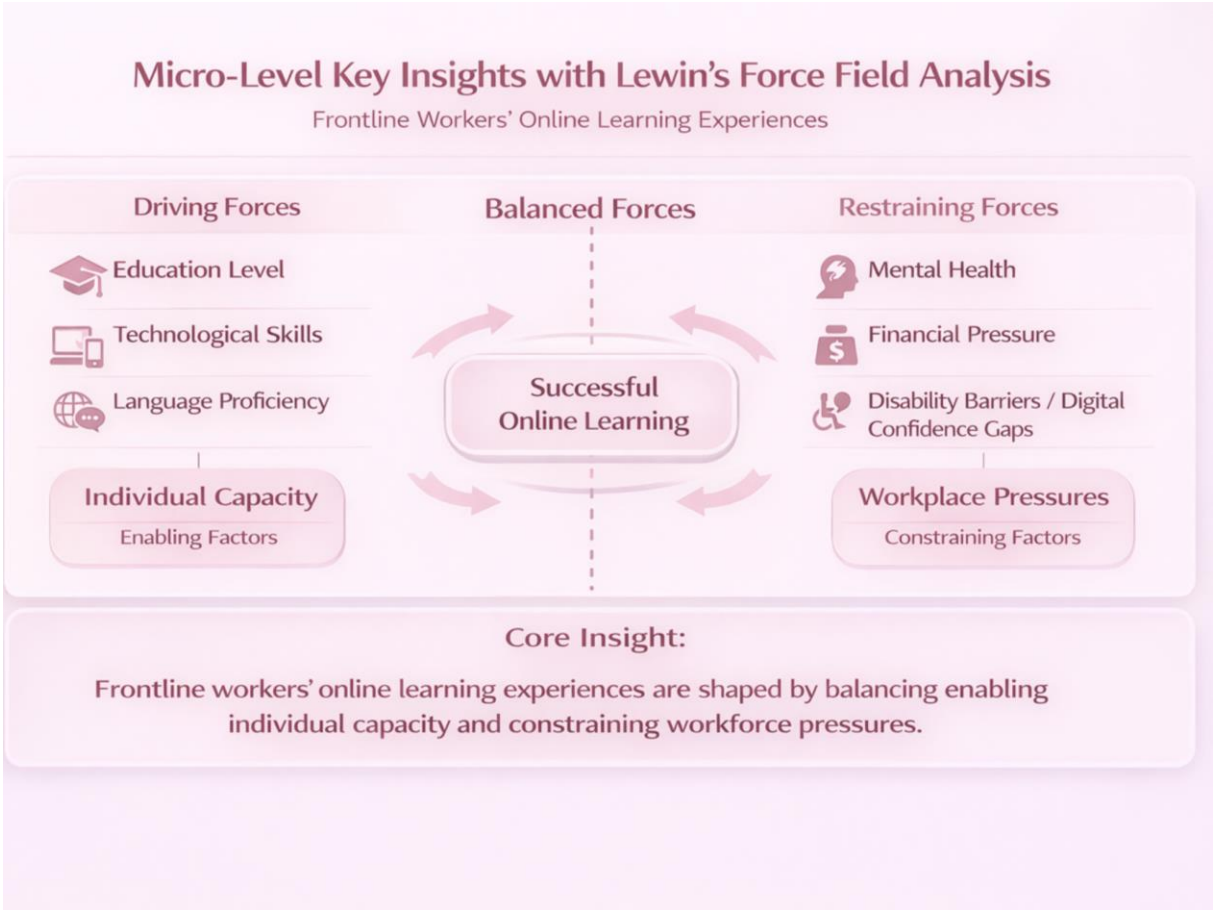
the mental energy to log into training," and "Online learning feels like one more thing on an already overwhelming plate." These responses illustrate that micro-level psychological strain interacted with meso-level staffing shortages, funding limitations, and limited protected learning time, reducing the temporal and cognitive resources required for meaningful engagement.

When considered together, these findings suggest that digital competence and education functioned as forms of enabling capital, while mental health strain, financial precarity, and workload pressures functioned as restraining forces within Lewin's equilibrium model. However, these forces did not operate independently at the individual level. Rather, they were experienced within organizational and structural conditions that either strengthened enabling capacity or intensified restraint. In this sense, micro-level learning experiences were shaped not only by personal readiness, but by the wider field in which that readiness was supported, limited, or undermined.

These micro-level experiences reflected not only individual capacity, but the conditions produced by organizational supports and wider structural pressures (Figure 8).

Figure 8.

Micro-Level Force Dynamics Influencing Frontline Workers' Online Learning Experiences.



Note. This figure interprets the micro-level findings through Force Field Analysis by showing how enabling individual capacities and restraining workforce pressures shaped the balance of forces surrounding online learning.

Meso-Level Analysis: Organizational Mediation of Wider Pressures

If micro-level experiences reflected how workers encountered online learning in practice, meso-level findings help explain the organizational conditions through which broader system pressures were mediated. Agencies did not merely host online learning; they translated, buffered,

or intensified the wider pressures shaping whether training became accessible, meaningful, or burdensome.

The literature review highlighted the role of organizational context in shaping workforce learning opportunities. Agencies that prioritized innovation and continuous improvement created environments consistent with learner-centered frameworks (Pelster et al., 2016). Funding availability and structured professional development systems operated as strong drivers when present. The findings of this study support that position. Quantitatively, a clear majority of participants reported positive or strong positive impacts when their organizations demonstrated commitment to innovation, professional development, and flexible delivery models. Qualitatively, respondents described paid training time, leadership encouragement, and accessible learning platforms as factors that increased motivation and participation.

Economic precarity and motivation also shaped learning experiences, as participants remarked, “When you’re underpaid, it’s hard to feel motivated to do extra training,” and “If it’s not paid time, it’s difficult to justify.” These comments align with the quantitative findings, in which a substantial proportion of respondents reported that wages and workload were restraining forces. The data show that participation depended not only on the availability of online learning but also on whether employees received financial and structural support to participate in it.

However, inconsistent internal processes and resource constraints mirrored broader nonprofit funding challenges within the sector (Dawson et al., 2021). Participants described delayed approvals, unclear communication about training opportunities, and uneven support across agencies. These experiences reflect the structural funding limitations and administrative pressures documented in the literature. Żur and Friedl (2021) emphasize the importance of

balancing cost efficiency with thoughtful design and support. The present study reinforces this argument. Although online learning was commonly used to promote efficiency and standardization, participants emphasized that thoughtful design, sufficient time, and organizational support were crucial for sustaining learning that was both meaningful and feasible.

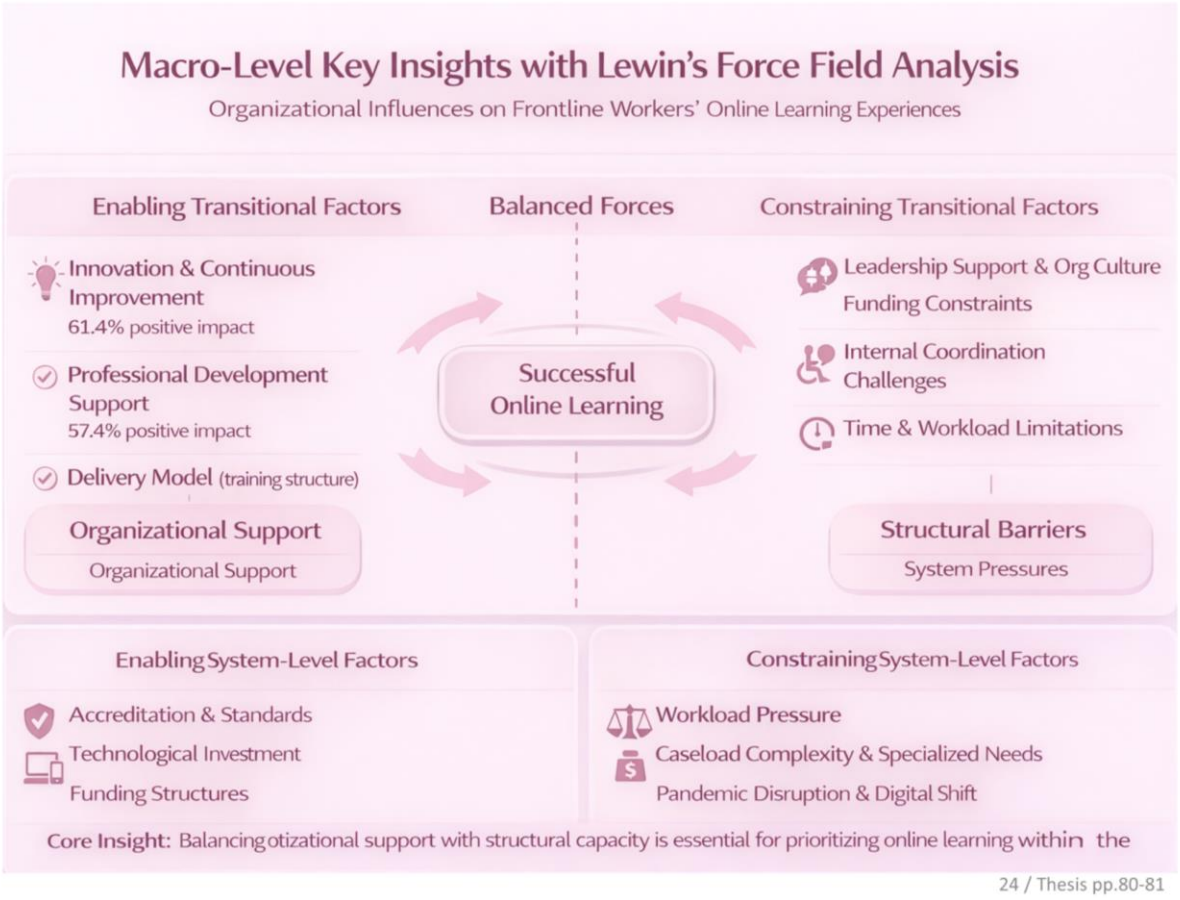
This is important because the findings suggest that online learning was not experienced as sustainable simply because it was available. Rather, its value depended on whether workers encountered it within conditions that made engagement realistic, supported, and worthwhile over time.

The meso-level findings indicate that agencies functioned as mediating sites within the field. Organizational supports such as professional development structures, innovation culture, paid training time, and accessible delivery models could buffer broader system pressures by making online learning more feasible in practice. Conversely, fragmented internal processes, inconsistent communication, and resource limitations could intensify those same pressures by shifting the burden of adaptation onto workers themselves. In this sense, organizations did not simply deliver training; they translated macro-level demands into the conditions under which frontline workers encountered online learning.

In this way, meso-level conditions served as the primary mediating layer through which broader structural pressures were either buffered or intensified before being encountered by workers.

Figure 9.

Meso- and Macro-Level Force Dynamics Influencing Frontline Workers' Online Learning Experiences.



Note. This figure illustrates how organizational supports and structural barriers mediate the translation of wider system pressures into frontline workers' online learning conditions.

Macro-Level Analysis: Structural Pressures and Digital Transformation

The macro-level findings help situate organizational and individual experiences within the broader structural field. System-wide pressures such as accreditation, pandemic disruption, and increasing caseload complexity did not remain external to workers' learning experiences;

they were carried into agency expectations, training structures, and everyday workforce conditions.

At the macro level, accreditation standards institutionalized expectations for continuous learning, serving as structured drivers, while the COVID-19 pandemic accelerated the adoption of online platforms in line with global health directives (World Health Organization, 2020). Alberta's PDD sector, like many health and social service systems, entered the pandemic without a coordinated, disability-specific response plan, thereby increasing exposure risks and destabilizing service-delivery structures (World Health Organization, 2020). Provincial workforce reporting further documented intensified workload pressures, rising operating costs, and sustained strain on service providers during and following the pandemic (Alberta Council of Disability Services, 2022d).

COVID-19 functioned as a macro-level force within the Force Field Analysis framework by altering both the driving and restraining forces shaping online learning experiences. Approximately 45% of respondents reported that COVID-19 had a significant or extreme impact on their online learning experiences. Post-pandemic responses further indicate that this disruption was not temporary, with 25% reporting that significant changes to online learning remained in place and another 20.83% indicating that agencies continued to develop online learning opportunities.

On the restraining side, qualitative responses revealed increased workload, emotional strain, trauma, isolation, and reduced time for training. Participants described overload and diminished human interaction. These findings align with broader research documenting elevated stress, fear of infection, insufficient protective resources, and psychological burden among

frontline and essential workers during the pandemic (Das et al., 2021). Within Alberta's PDD sector specifically, workers reported mental and physical exhaustion, compounding pre-existing burnout concerns (Alberta Council of Disability Services, 2022d). In this way, COVID-19 amplified pre-existing vulnerabilities within the workforce.

Additional structural constraints emerged from the nature of direct care work. Many frontline roles were not compatible with remote delivery, and implementing safety measures introduced further operational obstacles (Jashinsky et al., 2021; Vromans et al., 2023). Furthermore, the prevalence of multiple job holding among FLWs increased infection risk across work settings and heightened instability within the workforce (Baughman et al., 2022). These contextual realities strengthened restraining forces by reducing available time, energy, and psychological capacity for online learning.

On the driving side, the pandemic forced rapid digital adoption. Respondents described a complete shift to online platforms and the normalization of virtual learning environments. Many reported increased technological proficiency and improved comfort with digital tools. Some explicitly noted that online learning "opened a door that has never been shut" because of convenience and accessibility. This mirrors literature identifying COVID-19 as a catalyst for rapid digital transformation across health, social service, and community-based sectors, compressing years of incremental implementation into months (World Health Organization, 2020; Vromans et al., 2023). In Force Field terms, COVID-19 increased the strength of meso-level drivers such as digital infrastructure, technological competence, and institutional acceptance of online delivery.

These macro-level forces became significant not only because they existed at the system level, but because they altered the balance of forces at the meso and micro levels. Pandemic disruption increased reliance on online delivery, but whether that shift was experienced as supportive or burdensome depended on agency structures and worker capacity. Similarly, accreditation and sector expectations increased the demand for learning, but the consequences of those expectations were mediated through organizational support, time allocation, and workers' emotional and cognitive readiness. The macro-level findings reveal not a distant backdrop, but an active part of the field through which online learning experiences were shaped.

Overall, technological readiness, organizational investment, funding structures, and workload pressures emerged as the most consistent determinants of frontline workers' online learning experiences in Alberta's PDD sector. The importance of technological readiness and digital literacy in shaping workplace online learning outcomes has been well documented in adult and workplace education research (Cheng et al., 2014; Koller et al., 2022; Morin et al., 2019). Organizational investment, including leadership support and the development of a learning culture, has likewise been identified as critical to the successful implementation of online learning (Ravichandran & Mishra, 2017; Stylianou & Savva, 2016; Wong & Sixl-Daniell, 2015). Funding constraints and competitive procurement structures within the PDD sector further shape the feasibility and sustainability of training initiatives, particularly where training costs must be absorbed within operating budgets (Alberta Council of Disability Services, 2019; Halton, 2012; Sonpal-Valias, 2019). In addition, workload pressures, burnout, and staffing shortages have been shown to directly affect workers' capacity to engage in professional development and online learning (Alberta Council of Disability Services, 2022c; Martínez-López et al., 2021; Yeatts et al., 2018).

These findings highlight specific forces that Lewin (1947) identities as requiring strategic reduction, as they impose systemic restraints on the adoption and long-term sustainability of online learning within this workforce.

The macro-level findings were thus consequential not as distant background conditions, but as forces that shaped organizational realities and, through them, workers' day-to-day online learning experiences.

Theoretical Contribution

This study advances Lewin's (1947) Force Field Analysis not simply by identifying drivers and restraints related to workplace online learning, but by showing how those forces interact across the field of frontline workers' online learning experiences in Alberta's PDD sector. The contribution of the study lies in demonstrating that online learning experiences were not merely individual outcomes or isolated organizational issues. Rather, they were shaped through the interaction of structural pressures, organizational mediation, and individual capacity.

More specifically, the findings extend Force Field Analysis in three ways. First, they show that the relevant forces were distributed across micro-, meso-, and macro-level conditions rather than confined to a single site of influence. Second, they show that these forces did not act independently; they reinforced, moderated, and translated one another across levels. Third, they show that some forces operated conditionally, functioning as enabling or restraining depending on the surrounding context. Online delivery is one such example: it increased accessibility, flexibility, and standardization under supportive conditions, but became an additional source of strain where workers lacked time, digital confidence, or organizational support.

This conditionality contributes to what may be understood as a **solution–burden paradox** within workforce online learning. In this study, online learning was frequently positioned as a solution to training demand, accessibility, and sector-wide standardization. However, the same mechanism became burdensome when introduced into conditions marked by overload, fatigue, low digital confidence, limited time, or inadequate organizational support.

Summary

Chapter 5 examined the findings through Lewin's Force Field Analysis and showed that frontline workers' online learning experiences were shaped by interacting forces across the micro, meso, and macro levels. At the micro level, education, language proficiency, and digital competence strengthened readiness for online learning, while mental health strain, financial precarity, and workload burden reduced that readiness. At the meso level, organizational culture, protected learning time, professional development support, and delivery design either buffered or intensified these conditions. At the macro level, accreditation, pandemic disruption, and increasing caseload complexity structured the broader environment within which online learning expectations were established and sustained.

Together, the findings indicate that these forces did not operate independently. Structural pressures shaped organizational realities, organizational realities shaped individual learning conditions, and individual workers encountered online learning through the cumulative effect of these interacting forces. The study demonstrates that online learning experiences in Alberta's PDD sector were system-shaped rather than merely individual and that sustainable workforce learning depends on strengthening enabling forces while reducing restraining forces across the field.

Chapter 6: Conclusion

This study examined frontline workers' online learning experiences in Alberta's Persons with Developmental Disabilities sector through the lens of Lewin's (1947) Force Field Analysis. At its core, this dissertation asked a practical and urgent question: how can frontline workers be better supported through accessible, effective, and sustainable online learning within the realities of direct support work? That question emerged not only from the literature, but from the human reality of frontline work itself—work that is complex, emotionally demanding, high risk, and too often carried out in systems where training expectations exceed workforce capacity (Dawson et al., 2021; Pelster et al., 2016; World Health Organization, 2020). The findings show that online learning experiences were not shaped by technology alone, nor by individual motivation in isolation. Rather, they were shaped through the interaction of structural pressures, organizational conditions, and personal capacity across the micro, meso, and macro levels.

The significance of this study lies in its workforce-centred contribution. Few Canadian studies have examined online learning from the perspective of frontline workers in community disability services, and fewer still have done so through a multi-level framework grounded in both quantitative and qualitative evidence. By drawing on the experiences of 103 frontline workers, this dissertation provides rare empirical insight into an understudied, unregulated workforce and offers a more grounded understanding of the conditions that make online learning possible, difficult, or unsustainable in practice (Alberta Council of Disability Services, 2024; Truong et al., 2021). In that sense, the contribution of this study is not simply that it identifies barriers and supports. It shows more clearly how frontline workers experience online learning under real workforce conditions.

Collectively, the findings answered the research questions by identifying the principal driving and restraining forces shaping frontline workers' online learning experiences and by showing that those forces did not operate independently. Micro-level factors such as education, digital confidence, mental health, and financial precarity were experienced within meso-level organizational conditions such as leadership support, protected learning time, internal processes, and delivery design. Those organizational conditions were themselves shaped by broader macro-level pressures, including accreditation, funding structures, service complexity, and the enduring effects of COVID-19. In this sense, the study shows that online learning experiences were system-shaped rather than merely individual (Lewin, 1947; Żur & Friedl, 2021).

Research and Sector Contributions

This dissertation contributes to research by moving beyond the identification of isolated barriers and supports. Instead, it demonstrates how forces interact across the field of frontline workers' online learning experiences. The findings show that online learning was shaped more by structural pressures, organizational mediation, and emotional and practical work realities than by technological readiness alone. Leadership support, protected learning time, innovation culture, inclusive design, and delivery conditions mattered, but so too did workload strain, low wages, burnout, and broader sector pressures. This is consistent with literature showing that workforce learning is deeply shaped by organizational culture, system conditions, and learner-centred design rather than by access or technology alone (Cleveland-Innes & Stenbom, 2023; Govaerts et al., 2011; Muñoz-Pascual & Galende, 2017; Pelster et al., 2016).

The study also extends Lewin's Force Field Analysis in a way that is meaningful for workplace learning. The findings show that forces were distributed across micro, meso, and macro conditions; that they reinforced, buffered, translated, and intensified one another across

levels; and that some forces operated conditionally. Online learning itself illustrates this clearly. It was often valued for flexibility, accessibility, and scalability, yet those same features became burdensome in contexts marked by fatigue, low digital confidence, limited protected time, or inadequate organizational support. This solution–burden paradox shows that the same mechanism may function as either enabling or restraining depending on the surrounding field. In doing so, the dissertation moves beyond traditional digital learning models and offers a broader explanation of how online learning is experienced within complex frontline care environments (Lewin, 1947; Cleveland-Innes & Stenbom, 2023; Żur & Friedl, 2021).

For Alberta's PDD sector, the study offers a rare, empirically grounded, multi-level contribution. It provides evidence that structural and organizational barriers often outweigh technological barriers alone. It highlights the importance of organizational culture, leadership support, protected learning time, digital onboarding, and inclusive design. Most importantly, it re-centers the voices of frontline workers in a workforce conversation that has too often focused on systems, compliance, or service delivery without fully accounting for how workers themselves experience learning under real conditions. As reflected in the oral defence framing, this study shifts the interpretation of online learning away from individual skills and motivations alone and toward the broader conditions that make learning possible—or not possible—in practice (Alberta Council of Disability Services, 2024; Ryan et al., 2019; Truong et al., 2021).

Driver–Restraint Aligned Recommendations for Research and Practice

The recommendations below translate the driving and restraining forces identified in Chapters 4 and 5 into practical directions for policy and practice. Consistent with Lewin's (1947) Force Field Analysis, sustainable change requires both the strengthening of drivers and the strategic reduction of restraints. The central implication of this study is that improving online

learning for frontline workers requires more than making training available. It requires system-level and organizational conditions that make learning possible, supported, and realistic (Dawson et al., 2021; Pelster et al., 2016; Żur & Friedl, 2021).

Recommendation 1: Institutionalize funded professional development and protected learning time

Formal policy-level allocation of professional development budgets and protected paid learning time would reinforce organizational drivers such as innovation culture, funded training, and professional development support. It would also reduce barriers related to funding instability, inconsistent processes, and time scarcity. Where training is expected but not built into the realities of work, online learning can quickly become another burden added to an already strained workforce. This recommendation aligns with the study's core finding that training expectations must be aligned with workforce capacity if learning is to be meaningful and sustainable.

Recommendation 2: Align education with meaningful recognition and wage progression

Linking accredited learning to tangible recognition, wage progression, or role advancement would strengthen education as a structural driver rather than leaving it disconnected from workers' material realities. The findings show that financial precarity and low wages reduced motivation and capacity to engage in learning. When educational effort is not matched by tangible benefit, the system risks asking workers to carry the burden of development without equitable return. This is particularly important in an unregulated workforce where education is often encouraged but not always materially recognized.

Recommendation 3: Design for inclusion, usability, and realistic participation

Inclusive design should be treated as a core condition of quality rather than an optional enhancement. Online learning in this sector must account for digital confidence, language demands, disability-related access needs, mental health strain, and cognitive load. This includes accessible platform design, clear navigation, modular structure, pacing flexibility, and training that reflects real practice rather than abstract compliance alone. High-quality learning is not simply digital delivery; it is learning that workers can access, navigate, interpret, and use (Cleveland-Innes & Stenbom, 2023; Koller et al., 2022; Morin et al., 2019).

Recommendation 4: Build stronger organizational mediation through leadership and internal systems

Organizations played a mediating role throughout this study. Agencies could buffer structural pressures by providing leadership encouragement, clear communication, paid training time, and accessible delivery conditions, or they could intensify those pressures through fragmented processes, uneven support, and weak coordination. Service-providing agencies should invest in leadership development, clearer internal learning systems, and stronger organizational learning cultures so that training is supported rather than merely expected. In the language of the study, organizations functioned as drivers or restraints depending on whether leadership, culture, resources, and work processes supported or constrained online learning.

Recommendation 5: Treat wellbeing and workload as learning conditions, not separate issues

Mental health strain, emotional labour, fatigue, staffing shortages, and complex caseloads were not peripheral to online learning. They shaped whether workers had the time, energy, and

cognitive capacity to engage at all. Recommendations for workforce learning must include workload reduction strategies, realistic training expectations, better access to equipment and support, and organizational approaches that recognize wellbeing as central to learning capacity. This reflects one of the clearest lessons of the study: meaningful learning cannot be separated from the conditions under which care work is performed.

Strengths and Limitations

This study has several strengths. It draws on a substantial and credible respondent pool for a difficult-to-reach workforce and centers the voices of frontline workers in a sector where those voices are rarely captured in this level of detail. The mixed-methods exploratory case study design made it possible to identify broader response patterns while also capturing qualitative descriptions of workers' lived realities. The study further contributes by examining online learning experiences through an explicitly multi-level framework grounded in Lewin's Force Field Analysis and by retaining factors based on quantitative strength, qualitative consistency, and relevance to the research questions (Creswell & Plano Clark, 2018; Morgan, 2007).

At the same time, several limitations should be acknowledged. The study was exploratory rather than causal and does not claim statistical representativeness. All survey questions were optional, which resulted in varying response counts across items and may have introduced response bias. The survey design also did not allow for follow-up clarification or participant validation of interpretation, and data were collected exclusively from frontline workers rather than from multiple stakeholder groups. These limitations do not diminish the value of the findings, but they do mean that the results should be understood as analytically meaningful and practice-informing rather than universally generalizable (Yin, 1994).

These limitations also point directly to future research needs. Longitudinal research could examine how online learning experiences evolve over time and whether participation translates into learning transfer and practice change. Comparative studies across agencies, regions, and service models would further strengthen understanding of how context shapes learning. Additional research is also needed on emotional labour, well-being, leadership, and the relationship between online learning experiences and actual learning effectiveness. As argued in the oral defence, this study creates a foundation for future outcome-based and transfer-oriented research rather than claiming to resolve those questions itself.

Conclusion

In conclusion, this dissertation shows that meaningful online learning for frontline workers occurs within systems, not in isolation. Learning experiences were shaped by the interaction of personal capacity, organizational environments, and structural workforce conditions. When those systems were aligned, online learning became more accessible, more effective, and more relevant to practice. When they were misaligned, the same learning mechanisms could become burdens rather than supports. That is one of the clearest lessons of this study and one of its central contributions.

The central implication of this research is clear: improving online learning for frontline workers in Alberta's PDD sector requires more than digital access or content delivery. It requires conditions that make learning possible, supported, and worthy of the workforce it is designed to serve. This study does not offer a final answer to workforce learning in the sector, but it does offer a stronger foundation for policy, practice, and future research by showing where the most important pressures lie, how they interact, and what must change if online learning is to support frontline workers in meaningful and sustainable ways.

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Appendices

Appendix A
Micro-Level Quantitative Impact Results

Table A1

Perceived Impact of Micro-Level Factors on Online Learning

Factor	Valid n	Positive / Strong Positive (%)	Neutral (%)	Negative / Strong Negative (%)
Age	88	38.64	39.77	10.23
Gender	83	1.20	73.49	0.00
Ethnicity	80	12.50	71.25	5.00
Disability	68	1.47	39.71	20.59
Mental Health	72	8.33	44.44	20.83
Language Proficiency	77	55.84	32.47	2.60
Education Level	77	63.64	25.97	3.90
Technological Skills	74	58.11	17.57	20.27
Wages / Salary	55	7.15	50.00	30.00
Tenure	71	39.44	40.85	9.86

Note: Percentages represent valid responses per item. Responses that are not applicable or involve non-disclosure have been left out. Sample size varied by question due to the optional survey design. All percentages have been rounded to the closest tenth.

Appendix B
Meso-Level Organizational Impact Results

Table B1

Perceived Impact of Organizational Factors on Online Learning

Factor	Valid n	Positive / Strong Positive (%)	Neutral (%)	Negative / Strong Negative (%)
Innovation & Continuous Improvement	70	61.43	24.29	10.00
Internal Processes	69	40.58	33.33	20.29
Funding Availability	67	29.85	25.37	25.37
Professional Development Support	68	57.36	20.59	7.35
Agency Location	68	32.35	54.41	8.82
Agency Size	67	28.36	53.73	13.43
Delivery Model	67	59.71	26.87	7.46

Note. Percentages represent valid responses per item. Totals may not equal 100% due to rounding. Sample size varies by question.

Appendix C
Macro-Level External Impact Results

Table C1

Perceived Impact of Macro-Level Factors on Online Learning

Factor	Valid n	Positive / Strong Positive (%)	Neutral (%)	Negative / Strong Negative (%)
Accreditation Emphasis	60	75.00	—	0.00
COVID-19 (During)	66	45.46	18.18	—
Post-Pandemic Change	66	45.83	29.17	4.17
Health and Safety	67	41.79	46.27	—
Complex Caseloads	67	29.85	32.84	22.39

Note. Dashes indicate response categories not applicable to that item. Percentages are based on valid responses per question and rounded to the nearest tenth.

Appendix D Ethical Conduct for Research Involving Humans Certificate

Appendix E : Ethics Approval

Athabasca University

CERTIFICATION OF ETHICAL APPROVAL

The Athabasca University Research Ethics Board (REB) has reviewed and approved the research project noted below. The REB is constituted and operates in accordance with the current version of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2) and Athabasca University Policy and Procedures.

Ethics File No.: **25767**

Principal Investigator:
Ms. Heather McGilvary, Graduate Student
Faculty of Humanities & Social Sciences\Doctor of Education (EdD) in Distance Education

Supervisor/Project Team:
Dr. Marti Cleveland-Innes (Supervisor)

Project Title:
FACTORS AFFECTING THE ONLINE LEARNING EXPERIENCES OF FRONT-LINE COMMUNITY SERVICE WORKERS IN ALBERTA

Effective Date: August 06, 2024 **Expiry Date**: August 05, 2025

Restrictions:

Any modification/amendment to the approved research must be submitted to the AUREB for approval prior to proceeding.

Any adverse event or incidental findings must be reported to the AUREB as soon as possible, for review.

Ethical approval is valid *for a period of one year*. An annual request for renewal must be submitted and approved by the above expiry date if a project is ongoing beyond one year.

An Ethics Final Report must be submitted when the research is complete *(i.e. all participant contact and data collection is concluded, no follow-up with participants is anticipated and findings have been made available/provided to participants (if applicable))* or the research is terminated.

Approved by: **Date: August 06, 2024**

Frits Pannekoek, Chair
Faculty of Humanities & Social Sciences, Departmental Ethics Review Committee

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Athabasca University Research Ethics Board
University Research Services Office
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Appendix F Survey Questions

Appendix F

Survey Questions

Formatted survey instrument for inclusion in the dissertation appendix

Instructions

Each survey question will ask you to identify a characteristic about yourself, your role, or your workplace in a multiple-choice format, followed by a question asking you to reflect upon whether that characteristic affected your experience with online education in the PDD sector.

1. Age

1a. Under which age group do you fall?

- 24 years and under
- 25 to 29 years
- 30 to 34 years
- 35 to 39 years
- 40 to 44 years
- 45 to 49 years
- 50 to 54 years
- 55 to 59 years
- 60 to 69 years
- 70 years and over
- I prefer not to answer this question.

1b. Would you like to share your experiences or have any comments about your age and how it may have affected your online learning experience?

2. Gender

2a. What gender do you identify with best?

- Female
- Male
- Transgender Female

- Transgender Male
- Gender Variant/Non-Confirming
- Not Listed
- I prefer not to answer this question.

2b. Thinking of your gender identity, and the roles and norms that may be associated with it, do you wish to share how your gender affected your online learning experience?

3. Visible Minority and Ethnicity

3a. Are you a visible minority?

- Yes (Go to question 3b)
- No (Go to question 3c)

3b. Which visible minority best represents your ethnicity?

- North American Indian/First Nation
- Métis
- Inuit
- Black
- Chinese
- Filipino
- Japanese
- Korean
- South Asian/East Indian (including Indian from India; Bangladeshi; Pakistani; East Indian from Guyana, Trinidad, East Africa; etc.)
- Southeast Asian (including Burmese; Cambodian; Laotian; Thai; Vietnamese; etc.)
- Non-White West Asian, North African, or Arab (including Egyptian; Libyan; Lebanese; Iranian; etc.)
- Non-White Latin American (including Indigenous persons from Central and South America, etc.)
- Person of mixed origin (with one parent in one of the visible minority groups)
- I prefer not to answer this question.
- Not Listed

3c. Would you like to share your experiences or have any comments about your ethnicity and how it may have affected your online learning experience?

4. Disability

4a. Are you a person with a disability?

- Yes (Go to question 4b)
- No (Go to question 4d)

A person with a disability has a long-term or recurring physical, mental, sensory, psychiatric or learning impairment and considers himself or herself to be disadvantaged in employment by reason of that impairment or believes that an employer or potential employer is likely to consider him or her to be disadvantaged in employment by reason of that impairment. Persons with disabilities are also those whose functional limitations owing to their impairment have been accommodated in their current job or workplace.

4b. You indicated you are a person with a disability. Please check all that apply below:

- Co-ordination or dexterity (difficulty using hands or arms, for example, grasping or managing a stapler or using a keyboard)
- Mobility (difficulty moving around, for example, from one office to another or up and down stairs)
- Blind or visual impairment (unable to see or difficulty seeing)
- Deaf or hard of hearing (unable to hear or have difficulty hearing)
- Speech impairment (unable to speak or difficulty speaking and being understood)
- I prefer not to disclose.
- Not listed disability (including learning disabilities, developmental disabilities, and all other types of disabilities).

4c. Would you like to share your experiences or have any comments about your disability and how it may have affected your online learning experience?

5. Mental Health

5a. Are you a person who has currently or in the past dealt with mental health illness?

- Yes (Go to question 5b)
- No (Go to question 6)
- I prefer not to disclose.

Mental illnesses are characterized by alterations in thinking, mood or behaviour associated with significant distress and impaired functioning.

5b. You indicated that you are a person who has experienced or is experiencing mental health concerns. If you wish to provide further details, please select the box(es) that apply to you. (Mark all that apply.)

- Mood disorders: major depression and bipolar disorder

- Schizophrenia
- Anxiety disorders
- Personality disorders
- Eating disorders
- Problem gambling
- Substance dependency
- I prefer not to disclose.
- Other: Please specify here.
- Not listed

5c. Can you share or comment on how your mental health may have positively or negatively affected your online learning experience? Or how online learning may have positively or negatively affected your mental health?

6. Official Language and English Proficiency

6a. What is your first official language?

- English
- French
- Prefer not to answer.
- Not listed

6b. How competent would you rate yourself in the English language?

Skill Area	Beginner	Intermediate	Advanced Proficiency	Unknown	Prefer not to answer
Understanding Spoken English	☐	☐	☐	☐	☐
Reading English	☐	☐	☐	☐	☐
Communicating with others in English	☐	☐	☐	☐	☐
Writing in English	☐	☐	☐	☐	☐

6c. Would you like to share your experiences or have any comments about your English ability and how it may have affected your online learning experience?

7. Education

7a. What is the highest level of education you have achieved?

- High School
- Certificate or diploma
- Undergraduate degree
- Graduate degree
- I prefer not to answer.
- Not listed:

7b. Would you like to share your experiences or have any comments about your education and how it may have affected your online learning experience?

7c. Of the education level indicated above, was it obtained in Canada:

- Yes
- No
- Prefer not to answer.

7d. Would you like to share your experiences or have any comments about where you received your education and how it may have affected your online learning experience?

8. Skills and Experience at Entry to the Industry

8a. When you first entered the industry working as a community service worker in Alberta, how skilled were you in the tasks you needed to know to complete your job?

- I had no background knowledge or experience.
- I had beginner background knowledge and skills.
- I had intermediate knowledge and skills.
- I was confident in the knowledge and skills I needed to be successful at my job.
- I was overqualified and had more skills and knowledge needed to complete my job.
- Prefer not to answer.
- Not listed:

8b. Would you like to share your experiences or have any comments about how your personal skills and experience may have affected your online learning experience?

9. Technology Skills at Entry to the Industry

9a. When you first entered the industry as a community service worker in Alberta, how would you rate your skills with technology?

- Non-skilled
- Little skill
- Medium skill
- Strong skills
- Advanced skills
- Prefer not to answer.
- Not listed:

9b. Would you like to share your experiences or have any comments about your knowledge of technology and experience, and how it may have affected your online learning experience?

10. Wages, Salary, and Hours of Work

10a. What is your current wage or salary?

I am paid hourly.

- $15/hour Minimum wage
- $15–17/hr.
- 17–20/hr.
- 21–23/hr.
- 24–26/hr.
- 27–30/hr.
- 30–33/hr.
- 34–37/hr.
- 45.33/hr. or more.

I am paid a salary.

- 23,000/year
- 23–30,000/year
- 30–35k a year
- 36–40k/year
- 40–50k/year
- 51–60k a year
- 60–70k/year
- 71–80k/year
- 81–90k/year

- 90–100k/year
- 100k+ year

10b. Would you like to share your experiences or have any comment about your wages and how it may have affected your online learning experience?

10c. On average, how many hours a week do you work?

- Full-time (30 hours a week or more)
- Part-Time (less than 30 hours a week)
- Not listed:
- I prefer not to answer.

10d. Would you like to share your experiences or have any comment about the number of hours you work and how it may have affected your online learning experience?

11. Tenure

11a. How long have you worked for your current or most recent agency?

- Less than 1 year
- 1-2 year
- 2-3 years
- 3-4 years
- 5 years +
- I am currently unemployed as a frontline community service worker.
- Optional (reason for current unemployment).

11b. Would you like to share your experiences or have any comments about the length of time you worked with an agency and how it may have affected your online learning experience?

Questions 12–21: Workplace and External Factors

Think of your most recent position you held, or currently hold, and answer Questions 12–22.

12a. The agency strived to be innovative and continuously improve.

- Yes
- No
- Prefer not to answer.
- Other

12b. Would you like to share your experiences or have any comments about how the agency did or did not value continuous improvement or innovation and how it may have affected your online learning experience?

13a. The agency had well-defined internal processes that needed to be followed.

- Yes
- No
- Prefer not to answer.
- Other

13b. Would you like to share your experiences or have any comments about positive and/or negative experiences with internal processes and how they may have affected your online learning experience?

14a. The agency had funding available for online education.

- Yes
- No
- Prefer not to answer.
- Other

14b. Would you like to share your experiences or have any comments about the funding your agency received and how it may have affected your online learning experience?

15a. The agency valued the professional development and skill development of employees.

- Yes
- No
- Prefer not to answer.
- Other

15b. Would you like to share your experiences or have any comments about the organization's professional development opportunities and how they may have affected your online learning experience?

16a. The location of the agency could best be described as:

- Urban (within a city)
- Rural (located outside of a major city)
- Prefer not to answer.
- Other

16b. Would you like to share your experiences or have any comments about the agency's location and how it may have affected your online learning experience?

17a. The size of the agency can best be described as:

- Small (under 20 employees)
- Medium (20–50 employees)
- Large (50–100 employees)
- Over 100 employees
- Prefer not to answer.
- Other

17b. Would you like to share your experiences or have any comments about the agency's size and how it may have affected your online learning experience?

17c. This question would like to learn more about flexibility, accessibility, and the way in which your company provides online education. Please select the box that best describes the best answer for each question.

Statement	Yes	No	Unsure	Prefer not to answer
My agency develops and delivers its own online training.	☐	☐	☐	☐
My company subscribes to a learning platform that has courses that we take from.	☐	☐	☐	☐
My company will sign up for online courses with external training providers.	☐	☐	☐	☐
I complete my online learning during my own free time.	☐	☐	☐	☐
I am given time at work to complete my online learning.	☐	☐	☐	☐

I am paid for the time I spend online learning.	☐	☐	☐	☐
I have access to the technology and tools I need to complete online learning.	☐	☐	☐	☐
My work supplies the technology and tools I need for online learning.	☐	☐	☐	☐
I use my own technology and tools for online learning.	☐	☐	☐	☐

17d. Would you like to share about the accessibility and flexibility of online learning at your company and how the way online learning was delivered may have affected your experience? (i.e., time allotted, wages, technology/resources provided).

18a. How much emphasis did the organization place on accreditation standards and passing accreditation audits?

- Minimal (barely discussed)
- Medium (employees were aware but did not impact day-to-day)
- Large (accreditation was often discussed)
- Extreme (agency worked hard to achieve accreditation standards, and it played a significant role within the agency)
- Prefer not to answer.
- Other

18b. Would you like to share your experiences or have any comments about the agency's emphasis on accreditation and how it may have affected your online learning experience?

19a. How much did the COVID-19 pandemic impact on your online learning experience?

- Minimal (nothing changed)
- Medium (some changes were needed for the time being)
- Large (changes were made to online learning because of the COVID-19 pandemic)
- Extreme (agency worked hard to implement changes that will remain in place going forward)

- Prefer not to answer.
- Other

19b. Would you like to share your experiences or have any comments about the COVID-19 pandemic and how it may have affected your online learning experience?

20a. How much do health and safety requirements affect your online learning experience?

- Minimal (barely discussed)
- Medium (employees were aware but did not impact day-to-day or our training and education)
- Large (health and safety were often discussed and were an important part of our training and education)
- Extreme (agency worked hard to achieve health and safety standards, and it played a significant role within the agency and the training and education we received)
- Prefer not to answer.
- Not listed:

Would you like to share your experiences or have any comments about the value placed on health and safety policies at your agency and how they may have affected your online learning experience?

21a. It has been noted that Individuals Accessing Services are becoming more complex, meaning many of these individuals have co-existing issues of addiction, homelessness and criminal behaviour (Alberta Council of Disability, 2020). How much does the increase in complex caseloads affect your online learning experience?

- Minimal (barely discussed)
- Medium (employees were aware of complex individuals, but it did not impact day-to-day or the education and training we received)
- Large (Complex Individuals were often discussed, and employees were aware of it. We received some education and training for complex individuals)
- Extreme (agency worked hard to support and educate regarding complex individuals, and it played a significant role within the agency)
- Prefer not to answer.
- Not listed

21b. Would you like to share your experiences or have any comments about complex caseloads and how they may have affected your online learning experience?

22. Personal Characteristics Impact Scale

22. Consider your most recent online learning experience(s) directly related to a role within the PDD sector. Choose the appropriate level to which each of these personal characteristics affect your online learning experience.

Your Personal Characteristic	Strong Negative Impact	Negative Impact	No Impact	Positive Impacts	Strong positive Impact	I chose not to disclose	Not applicable
Age	☐	☐	☐	☐	☐	☐	☐
Gender	☐	☐	☐	☐	☐	☐	☐
Ethnicity	☐	☐	☐	☐	☐	☐	☐
Disability	☐	☐	☐	☐	☐	☐	☐
Mental Health	☐	☐	☐	☐	☐	☐	☐
English Proficiency	☐	☐	☐	☐	☐	☐	☐
Education	☐	☐	☐	☐	☐	☐	☐
Skills and Experience	☐	☐	☐	☐	☐	☐	☐
Technological Knowledge	☐	☐	☐	☐	☐	☐	☐
Wages/Salary	☐	☐	☐	☐	☐	☐	☐
Length of Time at Job	☐	☐	☐	☐	☐	☐	☐

23. Workplace Characteristics Impact Scale

23. Consider your most recent online learning experience(s) directly related to a role within the PDD sector. Choose the appropriate level at which each of these workplace characteristics affect your online learning experience.

The workplace and its…	Strong Negative Impact	Negative Impact	No Impact	Positive Impacts	Strong positive Impact	I chose not to disclose	Not applicable
Value placed on	☐	☐	☐	☐	☐	☐	☐

continuous improvement and innovation							
Internal Processes	☐	☐	☐	☐	☐	☐	☐
Funding Availability	☐	☐	☐	☐	☐	☐	☐
Value placed on Professional Development	☐	☐	☐	☐	☐	☐	☐
Location (Rural/Urban)	☐	☐	☐	☐	☐	☐	☐
Size of Agency/organization	☐	☐	☐	☐	☐	☐	☐
Model of Online Delivery (i.e., flexible, accessible, technology, pay).	☐	☐	☐	☐	☐	☐	☐
Value placed on Accreditation	☐	☐	☐	☐	☐	☐	☐

24. External Characteristics Impact Scale

24. Consider your most recent online learning experience(s) directly related to a role within the PDD sector. Choose the appropriate level at which each of these outside/external characteristics affected your online learning experience.

Outside/external characteristic	Strong Negative Impact	Negative Impact	No Impact	Positive Impacts	Strong positive Impact	I chose not to disclose	Not applicable
COVID-19 Pandemic	☐	☐	☐	☐	☐	☐	☐
Health and Safety Requirements	☐	☐	☐	☐	☐	☐	☐
Increase in Complex Caseloads	☐	☐	☐	☐	☐	☐	☐

25. Closing Open-Ended Question

25. Thank you for your participation in this survey. Before submitting this, this last question lets you share any significant factors that positively or negatively affected your online learning. This space is intended for your voice to be heard; please share anything you feel is important for us to know about online learning with the PDD sector.