2018

Community College Professors' Engagement and Perceptions of Professional Development in Remote Environments

Norma-Jean J. Nielsen
Walden University

Walden University

College of Education

This is to certify that the doctoral study by

Norma-Jean Nielsen

has been found to be complete and satisfactory in all respects,
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Review Committee
Dr. Therese Kanai, Committee Chairperson, Education Faculty
Dr. Kathryn Hollywood, Committee Member, Education Faculty
Dr. Andrea Wilson, University Reviewer, Education Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
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Abstract

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Abstract

Research shows that consistent, supportive, and relevant professional development (PD) is an action that empowers educators to change. In the east central region of Canada, the sustainability of community colleges had been linked to program collaboration and internationalization which requires implementation of high-quality PD for its professors. Guided by Mezirow's adult transformative learning theory, the purpose of this study was to understand the PD practices of full-time professors by investigating the connections between professors' level of engagement in PD and their perceptions of the resources and processes that may improve their instructional practices. This single-phased, concurrent mixed-methods study was conducted using a self-designed 39-item web-based survey to collect both quantitative and qualitative data. From a population of 600 full-time professors at 5 colleges, 120 surveys were completed. Descriptive statistics, chi-square test, and Fisher's exact test were used for quantitative analyses. Findings indicated that professors with higher levels of engagement in PD perceived the importance of making use of online and face-to-face networking strategies as well as available online resources to improve instructional practices. Emergent themes from the qualitative data were coded and confirmed the value of networking in PD. Results were used to design a workshop to help community college professors in planning and supporting their PD activities via enhanced networking strategies and implementation of online resources for instruction. By providing college professors needed opportunities to engage in customized PD focused on networking and maximizing the use of available online resources, colleges may be better prepared to foster active, engaged, and highly trained faculty capable of producing positive social change benefitting the institutions and students they serve.

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Dedication

This dissertation is dedicated to my husband, Lambert (Bert) John Nielsen, who

supported me unconditionally and enthusiastically throughout my academic studies and

teaching career. His practical wisdom and patience inspired me to conquer my fears and

to achieve my personal and educational goals. He continues to be the sunshine of my life.

Acknowledgments

I would like to thank my Walden University advisory committee, Dr. Therese Kanai, Dr. Kathryn Hollywood, and Dr. Andrea Wilson. Their professionalism, expertise, collegiality, and patience guided me through an amazing online journey of discovery and scholarship.

Special words of appreciation go to colleagues, students, friends, and family who provided encouraging words and supportive advice throughout this vital learning experience. Fernanda Fresco, MSc, and Kathy Kujala, MSc, HBComm, kept my head above water; Adam Delorme kept the technology operational. It is impossible for me to adequately express how special people's ongoing interest in my work and faith in my goals sustained me as I completed this doctoral degree. I must also recognize the influence of Dr. Bertine Bos (1930–2017) of Zutphen, Holland, who encouraged me to follow her example and take on this endeavor of passion, creativity, and commitment.

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Section 1: The Problem

Introduction

In this mixed-methods study, I addressed the professional development engagement and perceptions of full-time professors in five government-supported community colleges located in a remote midnorthern region of east central Canada. The problem under study was professional development programming that meets both the specific learning needs of individual professors and the operational requirements of the five community colleges. The need for this project study was based on two critical issues involving college professors and their professional development for ensuring the five colleges' sustainability: internationalization and program collaboration. I e-mailed an online survey to 600 professors listed in college directories and collected quantitative and qualitative data from 120 volunteer respondents. Using a cross-sectional survey design, data were collected at one point in time and measured current attitudes and practices (see Creswell, 2014). Mezirow's (2012) transformational theory provided a dynamic and interdependent framework for my examination of adult development and learning (see Malkki & Green, 2014; Mezirow et al., 2009; Taylor & Elias, 2012).

Each of the five colleges in this study annually served fewer than 5,000 full-time students. According to The National Academic Advising Association, smaller-sized academic institutions were negatively affected concerning professional development opportunities when compared to larger-sized academic institutions (Voller, 2011). In a study for the American Council of Education, Hillman and Weichman (2016) reported that, even in the 21st century, a college's geographic location plays a significant role in

shaping learning options, and policy makers should not overlook the context of postsecondary institutions. Combined with these concerns, there were reported conflicts between institutional and professional epistemologies that interfered with the engagement and continuous learning of professors in the east central Canadian community college system (Fedderson, 2008; McKay, 2014). In view of the fact that college professors' roles and responsibilities included maintaining subject discipline relevancy, using innovative learning and teaching practices, and preparing students for employment and lifelong learning (Howard & Taber, 2010), implications of these expectations affect the significance of professional development in the community college environment. Futhermore, national and international higher education research literature unequivocally stated how multifaceted socio-economical, technological, and global expectations were increasing demands on professors' roles and responsibilities within organizations (Buckley & Du Toit, 2010; Collinson et al., 2009; Crawford, 2010; Hassan, 2011; Howard & Taber, 2010; Kennedy, 2014; Kreber, 2013; McManus & Russell 2007; Parker, Hall, & Kram, 2008; VanDerLinden, 2014; Webster-Wright, 2010). Furthering knowledge in the field regarding the authentic and effective professional development of full-time professors working in the five colleges was my intention with this study.

Definition of the Problem

The problem I studied was how to create faculty development programming that meets both the specific learning needs of individual, full-time professors and the changing operational needs of five community colleges located in a remote midnorthern region of east central Canada. Researchers have identified that conflicts between teaching

professionals' epistemologies and institutional decisions reduced the success of professional development programming (Fedderson, 2008; Hargreaves & Fullan, 2012; McKay, 2014). Dissonance between policy and reality was problematic for authentic professional learning (Costa, Garmston, & Zimmerman, 2014; Webster-Wright, 2010). Inefficient professional development of educators was found to be a national concern for a variety of social and economic reasons (Behrstock-Sherratt, Bassett, Olson, & Jacques, 2014; Brooks & Gibson, 2012; Scoppio & Covell, 2016). Research involving the professional development of community college faculty in Canada has been limited for a wide variety of reasons (Fisher, 2006, 2008, 2009; Howard & Taber, 2010; McKay, 2014; Townsend, Donaldson, & Wilson, 2009; Twombly & Townsend, 2008).

The recognition of dramatic changes in the east central community college system in Canada was relevant to this study (see PricewaterhouseCoopers LLP, 2017). Community colleges emerged in the 1960s as an alternative to universities, and initially, these colleges offered access to a wide range of career-oriented programming including trades training, student development, and general education (Skolnik, 2010). Today, the 24 colleges of east central Canada provide a wide range of programs that represent arts, sciences, trades, and technology. Annually, the college system serves approximately 220,000 full-time and 300,000 part-time students and confers certificates, diplomas, and applied baccalaureate degrees (MacKay, 2014). Canadian government policies now require subsidized community colleges to access additional financial revenues through increasing corporate sponsorship, applied research, and international markets (Ontario Ministry of Training, Colleges and Universities, 2014b, 2015). Consequently, community

colleges face significant and rapid growth in many areas of their operation, along with increased demands for standards of accountability to the public, technological innovations, and globalization of the adult education market (Association of Canadian Community College, 2012; Colleges Ontario, 2014, 2015).

Changes have imposed the need for timely adjustments that require all eastern central community colleges to support relevant and innovative continuous professional development for professors (Colleges Ontario, 2014, 2015). According to Canadian federal and provincial governments, the educational reform of community colleges must involve transforming the system to meet the specialized skills and knowledge requirements of the innovation economy (Ontario Ministry of Training, Colleges and Universities, 2014b). Government expectations were repeatedly prefaced with reduced college funding, higher levels of productivity, and increased public accountability (Higher Education Quality Council of Ontario, 2012; Ontario College Quality Assurance Service, 2014). Subsequently, effective, system-wide faculty professional development programming was difficult to identify, particularly as rapid educational and technological changes are closely related to local, national, and international economic and social policies (Howard & Taber, 2010; Scoppio & Covell, 2016).

Significant international scholarly research has recognized the positive and negative aspects of systematic and intentional professional development (Elliot, 2014; Hargreaves & Fullan, 2012; McCormack, Ambler, Martin, Wait, & Wilson, 2016; Nicoll, 2014; Webster-Wright, 2010). Positive and constructive professional development initiatives have been found to empower educators and offer short- and long-term benefits

to students and institutions (Balan, Manko, & Phillips, 2011; Collinson et al., 2009; Cranton, 2016; Evans & Henrichsen, 2008; Fink, 2013; Schols, 2012; West, 2011). Negative aspects of professional development programs were usually related to environments where organizational direction, support, and training were inadequate or power and social relations were imbalanced (Byrne, Brown, & Challen, 2010; McCrickerd, 2012; Mitchell & Geva-May, 2009; Schols, 2012; Shagrir, 2017; Tagg, 2012; Tang & Choi, 2009). Researchers have frequently stressed the importance of institutional support to change organizational learning and culture (Crawford, 2010; Fink, 2013; Wright, 2010; Wynants & Dennis, 2018). Other philosophical concerns included the professional development of educators in a consumer-oriented or entrepreneurial environment that did not consider the broader social, economic, and political contexts of learning (Collinson et al., 2009; Fellenz, 2016; Fletcher, 2007; Hassan, 2011; Servage, 2009; Zhao, Coombs, & Zhou, 2010).

<div align="center">

Rationale

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Evidence of the Problem at the Local Level

My rationale for examining the professional development of full-time professors in five colleges located in a remote, midnorthern region of east central Canada was based on the importance of improving teaching and learning and supporting student success within a specific context. In adult education, educators' roles have changed to include a wider range of tasks and responsibilities related to the use of educational technologies, more collaboration with international businesses and educational institutions, new pedagogical approaches connected to life-long learning, and increased student diversity

(Annabi & Wilkins, 2016; Buckley & Du Toit, 2010; Chesney & Benson, 2012; Crawford, 2010; Hargreaves & Fullan, 2012; O'Meara & Lapointe Terosky, 2010, 2011; Schols, 2012). According to Loughran (2013), complex teaching and learning concepts demand a sophisticated understanding of the relationship between content knowledge and pedagogy. Scholarly studies in education recognized the value of consistent, supportive, and relevant professional development as an action that empowered educators to change (Barron, Dawson, & Yendol-Hoppey, 2009; Brookfield, 2010; Brooks & Gibson, 2012; Byrne et al., 2010; Cranton, 2016; Hargreaves & Fullan, 2012; Lindeman, 2011; Palmer, 2007; Wynants & Dennis, 2018).

The need for this project study was based on two critical issues for ensuring sustainability involving the five colleges and their faculty: internationalization and program collaboration between colleges. Colleges Ontario (2015), a key advocacy agency that advances policies and awareness campaigns for colleges of applied arts and technologies in east central Canada, stated that of 33,000 international students enrolled in 2015, only 5% chose to attend colleges located in northern regions. The annual budget submission, *Creating Opportunities for All.* identified that northern community colleges should access the benefits of internationalization and must adapt their programs and services for international students (Colleges Ontario, 2015). Collaboration between low enrollment northern colleges and high enrollment southern colleges was recommended in the budget submission, along with a request of $8 million in government funding over 3 years to support the initiative. With or without funding support, professors at northern colleges are expected to make teaching and learning adjustments to facilitate international

students, with approximately 58% of the students coming from China and India (Colleges Ontario, 2015).

The second need for this project study was demonstrated by the Northern Colleges Collaborative Programming Project where colleges started working on developing and implementing collaborative programming that will improve students' access to more programs (Ontario Ministry of Training, Colleges and Universities, 2015). The provincial government made a $3.6 million investment over 3 years to improve educational opportunities in key program areas, such as business, health, trades, and technology (Ontario Ministry of Training, Colleges and Universities, 2015). The project necessitated curriculum alignment and adjustments to facilitate student access between college programs, and these changes required colleges to recognize both commonalities and contextual differences in their working partnerships.

Both issues, internationalization and program collaboration, require faculty involvement and innovation that will demand professional development that is more comprehensive; therefore, policy makers must ensure that development opportunities are available and effective to meet the changing teaching and learning needs of professors as they work through these initiatives. Lindeman (1926) and Knowles (1962, 1980) acknowledged that adult educators who encountered significant institutional differences in subject areas, philosophies, and methodologies were often confused about understanding their teaching and learning priorities. In struggles for sustainability, educators significantly relied on each other for mutual problem-solving across the organization (Glowacki-Dudka & Helvie-Mason, 2011; Knowles, 1962, 1980; Lindeman,

1926). A descriptive understanding of professors' professional development engagement and perceptions will benefit the five colleges' decision-making related to effective professional development programming.

Additional evidence of the need for relevant and continuous professional development came from a decade of quantitative survey results of key performance indicators (KPIs) involving all 24 east central community colleges (Colleges Ontario, 2016). KPIs provide reliable information to students, parents, and stakeholders to ensure system-wide accountability and transparency (Colleges Ontario, 2015). Hook (2012) stated that the accountability of complex organizations was an essential part of democracy and public trust. Policymakers in adult education have preferred empirical evidence that consisted of measurable and quantifiable changes in student behaviors that linked to educational intervention (Griffin, 2011; Merriam, Caffarella, & Baumgartner, 2007). Annual surveys of KPIs were mandated by the Ontario Ministry of Training, Colleges, and Universities and were independently administered (Colleges Ontario, 2016). The resulting survey data were posted on the Internet in both official languages of English and French (Colleges Ontario, 2016). Areas of evaluation included employer satisfaction, facilities and resources, graduate employment, graduate satisfaction, graduation rate, knowledge and skills, learning experiences, services, and student satisfaction. KPIs, although very broad in scope, continue to be important for targeting general areas of improvement in east central community colleges. College marketing and promotional materials often refer to above-average KPIs to enhance student recruitment (Colleges Ontario, 2016).

In the past decade, east central community colleges' student graduation rates averaged 62.2% (Colleges Ontario, 2016). Whether individual community colleges were identified as achieving above or below this percentage, continuous improvement to enhance national economic development was expected in public postsecondary institutions (Government of Canada, 2013). Since 2013, annual KPI provincial data have consistently indicated that 20% of community college students surveyed were neutral or not satisfied with the overall quality of the learning experience in their programs (Colleges Ontario, 2016). From a national perspective, the measurement of productivity and quality within higher education institutions was acknowledged as being difficult to analyze as Statistics Canada data were very limited (Higher Education Quality Council of Canada, 2012), and quantitative survey instruments were limited in their design to gather in-depth information from respondents (Creswell, 2012, 2014; Servage, 2009). The Colleges Ontario (2016) website advised that individual community college results should not be compared because each of the 24 institutions was affected by differences in size, demographics, program mixes, and regional employment conditions. Alternatively, average to below-average feedback about any community college's operation was of concern for the organization because student enrollment and growth are both required for revenue stability (Ontario Ministry of Training, Colleges and Universities, 2014a).

In a competitive global market, effective professional development, involving critical thinking and challenging assumptions, is a significant factor in transforming organizations (Mezirow et al., 2009; Parker, 2016; Watkins, Marsick, & Faller, 2012). In practical terms, organizations nurture or hamper educators' development through its

culture or reward system (Cranton, 1996, 2016; Taylor et al., 2012). As political,

economic, and technological developments stimulate change and innovation, institutions

of higher education require relevant, effective, and cost-efficient professional

development for educators (Ontario Ministry of Training, Colleges and Universities,

2014b, 2015). Although community colleges were usually defined as institutions where

teaching and service were key responsibilities of professors, continuous subject discipline

development and improvement in teaching and learning expertise were needed to support

educational and organizational excellence (Higher Education Quality Council of Ontario,

2012, 2013). To meet the learning requirements of students in the 21st century,

institutions of higher education must be engaged in critical analysis of their work

(Grabove et al., 2012; Rodgers, Christie, & Wideman, 2014).

A universal singular approach to professional development in higher education

has been criticized in the research literature (Bouwma-Gearhart, 2012; Brooks, 2010;

Buckley & Du Toit, 2010; Chester, 2012; Collinson et al., 2009; Howard & Taber, 2010;

Musanti & Pence, 2010; Riveros, Newton, & Burgess, 2012; Shortland, 2010; Trust,

Krutka, & Carpenter, 2016, 2017). The 24 institutions of the east central community

college system shared many organizational commonalities, yet there were significant

differences such as geographic locations, regional employment markets, government

financial support, corporate sponsorships, student enrollment numbers, program

offerings, and tuition fees (Ontario Ministry of Training, Colleges and Universities,

2014a; Skolnik, 2010). Recognition of diversity in environments was similar to how

specific physical and psychological settings affected professionals as they investigated

and adapted their practices in the global workplace (Costa et al., 2014; Webster-Wright, 2010). Authentic professional learning moved beyond the assumption that participation in specific programs defined professional development (Elliot, 2014). The interpretation, identification, and development of teaching and learning relationships in educational institutions were important for success (Loughran, 2013).

In 2007, provincial government legislation gave east central community colleges the responsibility for autonomous program development and approval, with the requirement that colleges were still accountable to the public they served (Colleges Ontario, 2014). Accountability flowed from Program Quality Assurance Process Audits, which systematically aimed to ensure consistent quality standards and continuous improvement in the colleges (Colleges Ontario, 2014). Criteria 5.2 of the *Program Quality Assurance Process Audits Orientation Manual* (2014) stated that colleges must ensure that professors have support resources to enhance their teaching skills and maintain currency. The regulation further explained that effective teaching goes beyond technical competence and included professional pride and commitment to continuous development that promoted student learning (p. 18). My disciplined examination of full-time professors' professional development engagement and perceptions in this study offered information that will benefit decision-making at the five colleges.

I found further evidence of the requirement for significant and continuous professional development of professors in the historical origins of eastern central community colleges. The colleges' original hiring practice supported the 1967 government mandate that institutions offer skills training programs based on the needs of

local and regional employers; consequently, many teaching employees came directly

from business or industry (Howard & Taber, 2010; Skolnik, 2010). After five decades, a

practical or applied approach to learning and teaching was still promoted in community

colleges. Program diversity and competition between public and private educational and

training institutions increased the expectations for educators' academic and vocational

credentials (Higher Education Quality Council of Canada, 2014). Evidence of change

included that more than half of the eastern central community colleges provided degree

programs (Colleges Ontario, 2014). In addition, collective bargaining agreements

between the public service union and eastern central community college administrators

established salary increases for full-time professors' completion of academic degrees up

to and including the Master's level (Academic Employees Collective Agreement, 2017).

In contract negotiations, full-time professors were described as having completed 2 years

of probationary employment within the system, receiving employment benefits, and

paying dues for union membership (Academic Employees Collective Agreement, 2017).

On average, an individual professor's workload included four courses per 15-week

semester (Higher Education Quality Council of Ontario, 2012). In most cases, full-time

professors were scheduled 44 hours per week over a period of 36–38 weeks per year

(Academic Employees Collective Agreement, 2017).

The complexity of professional development and the significance of

organizational responsibilities have been acknowledged in the research literature.

Brookfield (2013) and Kennedy (2014) posited that purpose, power, and outcomes were

critical elements in many professional development decisions in higher education.

Kilgore (2011) described postmodern knowing and pedagogy as focusing on the possibility of positive change in education from analyzing multiple and local forms of truth and alternative understandings about power and authority relationships. College administrators in the east central community college system are responsible for issues related to professional development choices, timing, and the semester work assignment of professors (Academic Employees Collective Agreement, 2017). Although full-time east central community college professors are entitled to 10 mandatory paid professional development days per year and sabbatical options after 7 years of employment, community college administrators approve or deny subsidized professional development for individuals (Academic Employees Collective Agreement, 2017). Teras (2016) recommended an open dialogue and a workplace culture of inquiry, trust, and support for professionals to address their professionalism.

Evidence of the Problem from the Professional Literature

Hargreaves and Fullan (2012) affirmed that teaching and learning are critical to individual and collective human survival and quality of life; therefore, educational reform is a legitimate topic of public dialogue. Educational institutions benefit from building talent both for themselves and for society (Colleges Ontario, 2015; Hassan, 2011; Whitchurch, Skinner, & Lauwerys, 2009). Brookfield (2012) indicated that a critically reflective stance about teaching was necessary to avoid the naïve assumption that sincerity of intentions was all that was needed in educators' practices. Unexamined common sense or past experiences are not reliable guides to making professional decisions and judgments about teaching and learning (Cranton, 1996, 2012, 2016).

Critical reflection supports professional development and teaching through the reevaluation of decisions and behaviors (Parker, 2016; Smith, 2011). The effective transformation of institutions of higher education requires addressing change (Fellenz, 2016; Kasworm & Bowles, 2012). Change is complex because teaching and learning efficacy includes cultural, psychological, socio-economical, and political influences that affect educators' perceptions of professional development (Cranton, 1996, 2006, 2016; Dirkx, 2012; Hargreaves & Fullan, 2012; Kreber, 2013; Webster-Wright, 2010). Nicoll (2014) stated that people and educational institutions have a tendency to resist change and to maintain homeostasis and familiar systems.

Professional development is further complicated because the evaluation of educators' effectiveness has been frequently described as controversial, particularly when definitions and measurements were often ambiguous, subjective, and unsystematic (Brooks & Gibson, 2012; Kohurt, Burnap, & Yon, 2007; Loughran, 2013). Offering or mandating the same method or dose of learning to increase the numbers of educators rarely ignited an individual's sense of adventure or aspirations of personal improvement and social change (Bouwma-Gearhart, 2012; Brooks & Gibson, 2012; Fellenz, 2016; Lindeman, 2011). Miller, Bai, and Newman (2012) identified the traditional role of sabbatical leaves as valuable tools for rejuvenating full-time educators, yet their study involving 75 North American universities and colleges questioned the cost effectiveness and public accountability of this benefit. Their recommendations focused on administrators' responsibilities to ensure alignment with organizations' goals and comprehensive policies with clear expectations of faculty (Miller et al., 2012).

Effective educators must develop the qualities, characteristics, and skills of good adult teachers (Bouwma-Gearhart, 2012; Galbraith, 2004; McKeachie & Svinicki, 2014). The characteristics of good adult educators included understanding how the pedagogical model represents a focus on content; organization; sequence of delivery; and how the andragogical model represents the learning environment and learners' involvement in planning, implementation, and evaluation (Knowles, Holton, & Swanson, 2005). Yet, despite educators' expertise in higher education subject areas, Hassan (2011) stated that many had limitations in their instructional and technical processes. Specifically, Cranton (1996) described community colleges professors as content experts, often without formal educator credentials, who teach both adolescents and adults. Cranton acknowledged that college professors had primary responsibilities of teaching and service within their field of expertise with less emphasis on scholarly research as compared to university faculty. With change and system sustainability strategies, many east central community colleges were participating in applied research and were negotiating with degree-granting partners (Ontario Ministry of Training, Colleges and Universities, 2014b). Subsequently, responsibilities of community college professors were increasing in complexity and required relevant and innovative professional development with time and cost-efficiencies (Colleges Ontario, 2014; Gregory & Cusson, 2013).

In the research literature, continuous professional development was an expectation of all professionals (Alfrey, Cale, & Webb, 2012; Fellenz, 2016). Educators' participation in theory and dialogue, critical reflection, and collaborative inquiry with colleagues, despite the requirement of time and commitment, were found to be effective

and important strategies to develop good teaching practices and improvement (Byrne et al., 2010; McKeachie & Svinicki, 2014). Collaborative inquiry was reported as one effective strategy for facilitating action-oriented learning from experience because of its structure, recognition of multiple ways of knowing, and systematic validation procedures (Bouwma-Gearhart, 2012; Kasl & Yorks, 2002). Riveros et al. (2012) also proposed a practice-based approach for professional learning communities in education based on the importance of meaningful peer collaboration and teachers' practices, particularly teachers' agency, for school improvement and higher rates of student achievement. Initiatives for school improvement required understanding teaching practices within specific professional learning communities (Riveros et al., 2012). The failure of educational reform was often a result of organizations' oversimplified notions of teaching practices (Hargreaves & Fullan, 2012). The improvement of student learning outcomes, both academic and psychosocial, demanded the adoption of an alternative paradigm that promoted empowerment (Nicoll, 2014). The process of change or transformation that led to new challenges and destinations required comprehensive discussion and support (Malkki & Green, 2014).

Riveros et al. (2012) recommended that researchers should study the characterization of professional development because educators act out their understanding of knowledge in their practices and individually interpret their environment. Subsequently, educators' understanding of their professional practice and attitudes towards organizational goals has been viewed as even more important than the realignment of organizational structures (Webster-Wright, 2010). Change required the

transformation of educators' attitudes towards reform as compared to a focus on new practices (Hargreaves & Fullan, 2012; Parker, 2016). Educators needed to be aware of their own needs to learn and change (Fink, 2013). Acknowledging the role of teachers' agency in school reform supported a democratic dialogue (Brookfield, 2013). Faculty involvement also reduced conflict or aversion to change because the educators' knowledge, learning, and practices were embedded in the highly dynamic, context-bounded, and complex school environment (Crawford, 2010; Turner & Gosling, 2012). Educators' understanding of new policies or practices were crucial in implementation processes because understanding was ultimately transformed into practices (West, 2011).

According to Mezirow (2012), transformation in learning is related to adults' willingness to engage in deeper explorations about themselves and their relationships with people, organizations, and society. Fostering significant change in teaching and learning environments involves more than implementing policies and providing technique workshops (Dirkx, 2012; Kennedy, 2014; King, 2009; Palmer, 2007). A transformative paradigm includes the experience of creating and recreating meaning from understanding the inner self and its relationship to others and outward actions (Kasl & Yorks, 2012. This concept of personal understanding was related to the goal of fostering psychological wholeness as associated with individuals, interpersonal relations, and social development (Rogers, 1961). Educators' use of defense mechanisms, specifically denial and rationalizing, are ways that individuals, alone or within groups, try to prevent addressing unconscious content, problems, or loss of interest in their careers (Palmer, 2007). Attending to emotions in learning and teaching involves a process of observing,

discussing, and reflecting on past and present content, feelings, relationships, and interactions (Brookfield, 1995, 2010; Dirkx, 2012; Malkki & Green, 2014; Nicoll, 2014; Palmer, 2007).

Definitions

Agency: The sociological traditions regarding how individuals influence their life journey in intentional ways based on the assumption of free will to gain power over time and to create work environments that are supportive to the development of their thoughts (O'Meara & Lapointe Terosky, 2011).

Andragogy: A theory based on several assumptions about adult learners as proposed by Knowles (1968). Most adults are motivated and self-directed to solve immediate problems and primarily rely on life experiences as a resource for learning. The andragogical model represents learners' involvement in planning, implementing, and evaluating learning (Knowles et al., 2005).

Continuing professional development: A variety of formal and informal training and development activities that involve critical reflection of actions that facilitate control of an individual's lifelong learning (Shortland, 2010).

Pedagogy: Originally, a set of teaching assumptions based on seventh to 12th century European schools for young boys. It assigned the teacher full responsibility for decision-making around the key elements, or arts and science, of learning. Learners follow a logical and subject-centered direction (Knowles et al., 2005).

Significance

The development and utilization of educators' abilities and skills are critical for learning and teaching communities that must respond to continuous change based on the needs of life-long learners and a global economy (Jarvis, 2011; Taylor et al., 2012). Webster-Wright (2010) concluded that a comprehensive and holistic study of how and why professional development affected individuals respected the role of different personalities and perceptions (Cranton & Hoggan, 2012; Lindeman, 2011). Research on continuous professional development was not viewed as a panacea for problems in education, but it positively contributed to quality teaching and learning (Alfrey et al., 2012). Carey (2011) and Kreber (2013) acknowledged that teaching and learning in higher education aims to improve human compassion, sustainability, social justice, and equity. In a competitive higher education market, community college professors and their organizations need to know how to effectively implement, sustain, and balance professional development related to changes in vocational outcomes, pedagogy, andragogy, and innovation. Cranton (2006) noted that community college professors often focus their expertise on developing learners while overlooking their own professional growth and development. Research about educators' professional development processes and practices within a specific context may be useful for institutions with similar learning environments (Crawford, 2010).

According to the Conference Board of Canada (2010), an independent nonprofit research organization, 25% of Canadians between the ages of 25 to 64 have completed a college diploma. This figure was 10% higher when compared to other peer countries such

as United States, Germany, and Sweden (CITE). In the same study, Canada scored the lowest of 16 peer countries related to innovation and economic development. Innovation is necessary for participation in a global market, and high-performing education systems share a critical role in the nation's economic and social system (Conference Board of Canada, 2010).

Over the past decade, community colleges were required to make changes in many areas of program development and delivery, particularly as related to applied research (Colleges Ontario, 2015). Professional development that was viewed as consistent, supportive, and relevant was an action that empowered faculty to prepare for challenges (Barron et al., 2009; Bouwma-Gearhart, 2012; Byrne et al., 2010; Cranton, 2016). While much was known about professional development for Canadian educators in elementary schools, high schools, and universities, there was limited research on the professional development of community college professors (Carey, 2011; Howard & Taber, 2010).

Guiding/Research Question

The research question of a study is critically significant because it addressed the design, sampling, instruments administered, and data analysis techniques that followed a pragmatic method and system of philosophy (Johnson & Christensen, 2017; Onwuegbuzie & Leech, 2006). In this study, characteristics of pragmatism included recognition of the physical world and subjective elements of language and culture (see Johnson & Christensen, 2017). Additionally, financial accountability and standards of practice in government-supported higher education institutions are valued and essential

for sustainability (Higher Education Quality Council of Ontario, 2013). The complexity of the problem led me to employ a mixed-methods approach to explore professors' engagement and perceptions in professional development. Collecting and mixing both quantitative and qualitative data improved the accuracy of research (see Creswell, 2012, 2014; Lodico, Spaulding, & Voegtle, 2010; Onwueguzie & Leech, 2006). Cranton (2012, 2016) and Webster-Wright (2010) recommended that clarifying differences between professionals' continuous learning needs offers insight into ways of supporting and improving teaching and learning processes and resources.

Scholarship in teaching and learning has identified that the professional development of educators shifted from the cognitive acquisition of knowledge and instructional techniques to the recognition that learning also involved interrelationships between individuals and their social-cultural context (Brookfield, 2010, 2013; Daloz, 2012; Palmer, 2007; Webster-Wright, 2010). The responsibilities of east central community college professors included maintaining their discipline-specific expertise and following student-centered teaching and learning practices within a collaborative, diverse, and changing environment (Colleges Ontario, 2014). Loughran (2013) posited that multifaceted concepts of teaching and learning demanded a more sophisticated awareness of the relationship between content knowledge and pedagogy.

To guide this study, I developed the following research question:

What is the relationship between full-time professors' level of engagement in professional development and their perceptions of resources and processes that improve teaching and learning?

In nonexperimental research, independent variables are not under a researcher's control, yet descriptive information and analysis indicating trends in a population can make a contribution to exploring real-life or naturally occurring phenomena (Johnson & Christensen, 2017). Nonexperimental research does not provide proof for causality (Creswell, 2014). For this nonexperimental study, the dependent variable, influenced by the independent variables, was the community college professors' level of engagement in professional development. The independent variables were those variables that may have caused change: age, gender, teaching experience, learning opportunities, and influences from other people or agencies. I used nominal and ordinal scales which were linked to the statistical manipulation of the data that were most suitable for the information being communicated (see Johnson & Christensen, 2017; Johnson & Kuby, 2012). The null hypothesis stated that the variables were not related in the population from which the data were selected, while the alternative hypothesis stated that the variables were related in the population.

Review of the Literature

The literature I reviewed critically explored innovation and change in professional development practices in higher education. The limited amount of published research on Canadian community college professors' professional development compelled me to also examine peer-reviewed publications that discussed the development of university and adult educators, both nationally and internationally. Research literature offered information for comparison purposes (Merriam et al., 2007; Mezirow et al., 2009). I categorized the literature reviewed in three broad recurring themes that resulted from the

search. First, there was recognition of rapid socioeconomic change and the need for timely and innovative professional development adjustments in higher education (Buckley & Du Toit, 2010; Collinson et al., 2009; Hassan, 2011; Howard & Taber, 2010; Nicoll, 2014, Teras, 2016; Wyants & Dennis, 2018). Second, there was recognition of positive results from peer and collaborative professional relationships (Brady, 2009; Brooks, 2010; Buckley & Du Toit, 2010; Byrne et al., 2010; Chester, 2012; Cranton, 2016; Jackson, Stebleton, & Laanan, 2013; Shagrir, 2017; Shortland, 2010). Finally, there was recognition of the critical importance of supporting individual teacher agency and career development plans (Bouwma-Gearhart, 2012; Karakhanyan, Van Veen, & Bergen, 2012; Lebowitz, van Schalkwyk, & Ruiters, 2012; O'Meara & Lapointe Terosky, 2010; Riveros et al., 2012; Su, 2011). The conceptual framework of Mezirow's adult transformation theory that recognized change and the complexity of cognitive, emotional, and social interactions for authentic learning influenced this arrangement of themes (Malkki & Green, 2014; Mezirow, 1991; Mezirow et al., 2009).

I retrieved the literature reviewed for this study using key word, Boolean, and electronic searches in the Education Resource Information Center, EBSCOhost, Education Research Complete, and Canadian Business and Current Affairs Education databases. Google and Google Scholar were also used to verify key concepts and authors' web pages. The keyword search terms and phrases included *professional development in higher education, continuous professional development, transformative learning, adult education, community college, agency and professional development, teacher agency,*

collaborative learning, community college faculty, peer mentoring and coaching in higher education, online professional development, and *international higher education.*

Conceptual Framework

I viewed the conceptual framework of this study, related to effective professional development, through the lens of adult transformative learning. Mezirow (1991, 2000, 2012) remarked that adult learners are shaped by their culture, language, and experiences that defined limitations to potential learning. Transformative theory addresses emancipation and the dynamics of how individuals learn to critically and rationally reflect on social realities that have usually been defined by others (Mezirow, 1991). Critical reflection is advocated in many disciplines as good practice and part of professional development (Brookfield, 2013; Smith, 2011). Organizations that want to bring about a significant behavior change in employees have recognized transformative education theory as helpful (Cranton, 2006; Franz, 2011; Kennedy, 2014; King, 2009; Mezirow et al., 2009; Webster-Wright, 2010).

Mezirow (1991, 2012) used Habermas's theory of communicative action to provide the community context for transformational learning, including the description of the conditions of full participation and freedom in reflective discourse. Habermas's work suggested a new foundation for studying adult learning (Mezirow, 1991). Communicative learning operates on a logic that is different from an empirical-analytic inquiry or a deductive approach (Mezirow, 1991, 2012). Validity testing of what is right or wrong requires a form of rational discourse and consensus because of ever-changing ways of interpreting the world and the acquisition of new information (Mezirow, 1991). With the

goal of coping with innovation, adult learners shift their assumptions through perspective transformation experiences that represent significant learning (King, 2009; Malkki & Green, 2014; Mezirow, 2012). A positive environment for adult learning supports learners and educators to effectively assess and respond individually and collectively to a diversity of social values, issues, and changes in competitive education and economic markets (Jarvis, 2011; Kilgore, 2011).

According to Mezirow (1991, 1997, 2012), the role of educators is to encourage critical examination of learners' beliefs and behaviors in the context of their personal experiences and consequences in the learners' lives. Mezirow (1997, 2012) acknowledged that technological advances in industry and service sectors require autonomous and responsible employees who adapt to change, manipulate information, work with abstract concepts, collaborate in decision-making, and exercise critical judgment. Autonomy, in this environment, is the ability to critically reflect personal assumptions and to share and validate beliefs through the experiences of others who hold the universal values of truth, justice, and freedom (see Mezirow, 1991). Through transformation, adult learners become more discriminating in their thinking and decision-making and that ultimately benefits individuals and organizations (Franz, 2010; Paul & Elder, 2014). Mezirow's theory supports the assumption that educators are critical learners and must examine their changing roles, responsibilities, and consequences of actions based on the social values of justice and equality (Brookfield, 1995, 2012; Cranton, 2012; Fellenz, 2016; Taylor & Snyder, 2012).

Critical reflection and thinking related to assumption exploration can be used to identify people's beliefs, their background, and their validity based on the reinterpretation of old experiences using new expectations (Brookfield, 1995, 2006, 2012; Kreber, 2012; Malkki & Green, 2014; Smith, 2011). Critically reflective habits help educators to avoid repeated mistakes and improve their professional competency (Schon, 1987; Smith, 2011). Mezirow (1990, 2000, 2012) linked practitioners' philosophical outlook and transformative learning with experience, reflection, assessment, and problem-solving strategies. Distorted assumptions reduce the opportunities for participation, learning, transformation, and emancipation (Malkki & Green, 2014; Mezirow, 1990, 1991, 2012; Nicoll, 2014). Critical reflection and examination create fresh meanings, personal awareness, and growth resulting in a meaningful or improved connection with self and others (Fink, 2013; Taylor & Elias, 2012).

Adult educators, as role models of learning, have the responsibility to rationally critique their self-concepts, social roles, and responsibilities (Brookfield, 2013; Kasl & Yorks, 2012). Transformative lifelong learning increases self-awareness, clarifies beliefs and practices, encourages critical reflection, and develops an informed theory of practice which deepens the roles and goals of educators (Cranton, 2006, 2016; Cranton & Hoggan, 2012; Mezirow, 1991, 2000, 2012). It is advantageous for adult educators, who are expected to solve unpredictable and complex problems, to improve their teaching practices through professional development that includes self-awareness and epistemological transformation (Taylor & Elias, 2012). Interdependence or connectedness, a significant goal of education, also empowers people to achieve success

(Cranton, 2006; Fellenz, 2016; Franz, 2010; Kreber, 2013; Russell, 2008). Alfrey et al. (2012) stated that educators are enabled or constrained as a result of continuous change and multidirectional relations with students, past and present colleagues, and policy makers. Mezirow's (2012) transformational theory provides a dynamic and interdependent framework for the examination of adult development and learning (Malkki & Green, 2014; Taylor & Cranton, 2012, 2016).

This study was grounded in the conceptual framework of transformation based on modern humanistic, psychoanalytical, and behavioristic theories of how adults learn by interpreting their experience (see Cranton, 2006, 2012; Mezirow, 1991, 2000). The strength of this framework, as related to examining the teaching-learning efficacy problem at specific community colleges, was situated in three perspectives: epistemic, sociolinguistic, and psychological. The epistemic perspective considers the way knowledge is known and used, the sociolinguistic perspective considers the mechanisms of society and language, and the psychological perspective considers the self-concept (Mezirow, 1991). Meaning perspectives, representing the conditions for construing meaning of experiences, provided the criteria for evaluating specific orientations and interpretations in this study. Mezirow's (1991, 1997) theory facilitated a multidimensional and holistic approach to examining and interpreting phenomena while acknowledging and respecting the diversity of educators' experiences and opinions. Although transformative learning theory has been modified, debated, criticized, and repeatedly tested, it continues to be examined in adult learning across many subject areas (Kitchenham, 2008; Malkki & Green, 2014; Mezirow et al., 2009; Tisdell, 2012). I used

transformative adult learning theory as a lens to examine the engagement and perceptions of professors' professional development with the goal of improving the success of community college students.

Rapid Change and Adjustments in Teaching and Learning

My examination of professional development research enhanced this study by providing an overview of national and international professional development theories and practices. A common issue I found in current literature was that many higher education organizations, public and private, were in a crisis period of funding cuts, employee layoffs, and tuition increases; these realities required necessary adjustments for organizations' sustainability (Annabi & Wilkins, 2016; Buckley & Du Toit, 2010; Hassan, 2011). Fellenz (2016) posited that educators' continued learning and effectiveness in a complex and evolving environment was a central issue that involved independence and interdependence of individuals and social context.

Striving for excellence in teaching and learning requires educators and institutions to implement strategic and innovative improvements (Teras, 2016; Turner & Gosling, 2012). To describe contemporary business, social, and political environments, Parker et al. (2008) used the U.S. Army acronym of VUCA that represented the words "volatile, uncertain, complex, and ambiguous" (p. 487). Global competition, organizational restructuring, and mergers have resulted in workplace changes requiring continuous improvement for employees, and the promotion of learning is a financially viable and necessary strategy for adjusting to change (Parker et al., 2008; Saunders, 2012). Workplace differences in employee relationships range from a collaborative culture that

promotes problem-solving to a paternalistic culture that promotes traditional hierarchical processes and isolation (McManus & Russell, 2007). Educators may be encouraged or discouraged by organizational changes and entrepreneurial approaches (Saunders, 2012).

Collinson et al. (2009) and Hassan (2011) posited that postmodern trends and global mobility indicate that teacher professional development is closely related to countries' broader educational and social policies along with individual organizational improvement. When combined with expanded teacher participation in policy-making, collaborative and differentiated professional development improved the implementation of educational changes that involved interdependent systems (Hassan, 2011). Educators' roles are transformative, particularly in a society that requires people to develop the habit of continuous learning involving both theoretical and analytical knowledge and skills (Howard & Taber, 2010; Saunders, 2012; Teras, 2016). *Glocalization*, a term coined by Robertson (1995) and cited by Collinson et al. (2009), is based on the phenomena of global products or applications being transformed to reflect distinctive local markets with concepts being looped between global and local arenas and continuously changing and deepening in a mutually interdependent process. Similarly, Collinson et al. viewed the changing role of educators and their professional learning and discussions as directly related to global change and successful local implementation of innovations in education.

Improving practice in an environment of persistent change was an important consideration in Howard and Taber's (2010) qualitative inquiry research project in which four college professors with 8 to 25 years of experience in adult education. Their aim was not to generalize the educators' experiences but to examine the overlap between

experiences at personal, professional, and institutional levels. Upon analysis, they grouped the results as either supporting or inhibiting learners in faculty development opportunities. It became evident to them that although participants' colleges committed some resources to faculty development, there was a narrow focus on the "good" teacher concept with less interest in process and improving current practices. Recommendations from the inquiry included the need to effectively align professional and institutional epistemologies and changing practices with learning pedagogies and principles that focused on the needs of present-day learners (Howard & Taber, 2010). Wynants and Dennis (2018) stated that the student population in higher education was more diverse than in the past, and adjustments must be made for nontraditional students.

Kennedy's (2014) examination of models of continuing professional development reiterated the need for clarifying the fundamental purpose of implementing policy changes or reform to improve practice. Top-down and well-funded initiatives to reform policies and reward teaching excellence in 15 United Kingdom higher education institutions between 2004 and 2009 did not produce positive or sustainable results (Turner & Gosling, 2012). Failure of the reform was primarily related to the unique social realities within participating organizations and lack of support for educators in maintaining the initiative (Turner & Gosling, 2012). Conversely, a 4-year Australian study of vocational teachers indicated positive results from a professional development program that recognized that the change process required an effective model of implementation and assessment (Saunders, 2012). Dimensions of the model related to the

affective, behavioral, and innovative experiences of participants during a change process (Saunders, 2012).

Peer and Collaborative Professional Relationships

Benefits of peer and collaborative professional relationships were familiar themes in educational research (see Brookfield, 2010; Cranton, 2016; Knowles, 1980; Palmer, 2007), yet changing socio-economic environments and new technologies presented contemporary considerations (see Annabi & Wilkins, 2016; Buckley & Du Toit, 2010; Hassan, 2011; Saunders, 2012). Laksov, Mann, and Dahlgren (2008) concluded that encouraging higher education teachers to take courses in teaching and offering tools to influence teaching practices were not enough to create positive changes and increase educational quality. However, a collaborative approach around the development of a community of practice, including teaching and learning, showed potential for educator development. Significant factors described by the researchers included faculty ownership and engagement, shared language and goals, recognition of the value of formal and informal educational discourse, and the creation of ground-up initiatives to support change (Cranton, 2016; Laksov et al., 2008).

Similar findings were identified by von Konsky, Martin, Bolt, Broadley, and Ostashewski (2014) in that effective collaborative learning required meaningful contexts. Jackson et al. (2013) reported positive results when an interpretive approach was employed to understand how faculty assigned meaning to collaborative teaching. Benefits included the opportunity for faculty members to engage in subject areas outside of their own expertise, build interpersonal relationships with others, and explore high-impact

innovative strategies, pedagogies, and methodologies. A key finding of the study matched the recurring theme that organizations should promote active collaboration that extends professional development activities beyond individual programming (Crawford, 2010; Grabove et al., 2012; Jackson et al., 2013; O'Meara & Lapointe Terosky, 2010).

Shagrir (2017) examined perceptions of informal and formal collaboration within one higher education institution in the United Kingdom. Findings indicated that professors preferred to collaborate with colleagues who shared similar teaching roles and years of experience. Benefits of collaboration included feeling part of a learning community, having opportunities to promote ideas and share research, and problem-solving. Cranton (2016) remarked that educators involved in continuous professional development usually had significant experience in teaching strategies and their subject area. Guided opportunities to define and facilitate their own learning were needed more than authoritarian approaches (Cranton, 2016).

Other benefits of collaborative learning and peer development included improving the quality of education through enhanced communication and the sharing of best practices (Bennet & Barp, 2008). Byrne et al. (2010) presented a peer development model with emphasis on engagement in routine and structured discussion about teaching. Educators surveyed by Byrne et al. concluded that providing a more holistic view of teaching with respect for individual empowerment and collegiality were critical factors in successful learning communities. Interestingly, Buckley and Du Toit (2012) identified that learning and problem-solving were accelerated when informal but united communities of practices endorsed a holistic approach. Similarly, Shortland (2010)

reported a case study of peer observation practice where collegial feedback played a significant role in facilitating continuous professional development. Shortland described learning as the combination of personal and professional development within a lifelong context involving structure, continuous review, evaluation, planning, and implementation. The research noted that although peer feedback had the potential to be evaluative and threatening, preparation and training increased empathy and provided constructive feedback techniques (Shortland, 2010). Feedback was also identified as a critical element in a small-scale 2-year continuing professional development university project in the United Kingdom (Chesney & Benson, 2012). Password-protected electronic devices were given to academics for the recording of personal reflections, planning, and communication of learning experiences to meet the university's professional and accreditation standards. Findings revealed that participants appreciated the technology, but a greater value was placed on the active engagement and responses from colleagues' postings. Chesney and Bacon (2012) concluded that the personal learning systems reduced participants' sense of teaching-learning isolation.

Internet technologies offer innovative professional development opportunities and challenges for peer collaboration (Chesney & Benson, 2012; Cranton, 2016; Henning, 2012; Teras, 2016; VanDerLinden, 2014; Wynants & Dennis, 2018). Brooks (2010) acknowledged the need of higher education educators to receive help and support from colleagues, but opportunities for face-to-face or social interactions are sometimes restricted because of cultural norms, personal anxieties, disabilities, teaching responsibilities, and work schedules. Brooks suggested that since technological advances

push educators to utilize educational software, blending online and traditional classroom instruction could also inspire *hybridizing* of other practices, such as continuous faculty development. For example, formal, flexible, and accessible learning approaches combined with a constructivist learning philosophy would engage educators in critical reflection and conversations about teaching practices. Synchronous chats, bulletin boards, and reliable links to relevant literature were described as viable innovations and alternatives to developing collaborative learning communities (Brooks, 2010; Henning, 2012). Based on her experiences, Cranton (2016) reported that online discussions between educators usually offered an equitable environment that gave more time for reflective responses as compared to face-to-face environments with more social stressors.

Annabi and Wilkins (2016) posited that massive open online courses (MOOCs) were a feasible informal professional development option for educators. MOOCs provided resource sharing opportunities in a wide-ranging market and promoted skills and experiences with technology. Hybrid versions of MOOCs were viewed as having additional collaborative benefits (Annabil & Wilkins, 2016). Teras (2016) described a collaborative and online professional development innovation in Finland that emphasized supporting self-regulation skills and cooperative learning for educators. The learning environment promoted persistence, openness to learning, self-reflection, and motivation strategies. The desired transformation was to change perceptions and to move beyond isolated workshops of teaching techniques. Cranton (2016) maintained that continuous professional development of educators should involve understanding individuals and social norms to facilitate collaboration, self-evaluation, and power sharing. Wynants and

Dennis (2018) supported the convenience of online learning for professional development particularly when universal design principles were utilized to enhance instructional delivery and institutional values.

Collaborative and cross-disciplined professional development was examined by the Learning in Higher Education Australia Association with both positive and negative results (Dobozy, 2012). Symposium processes included preconference faculty submission of draft research papers, further paper development through face-to-face collaborative dialogue at the symposium, and post conference editing and publishing into a collective anthology. Conference goals were to offer a constructivist approach to professional development with collaborative activities as an alternative to the traditional transmission style of information distribution and networking. Obstacles, as observed by Dobozy (2012), included epistemological misalignment between conference planners and participants' idiosyncratic experiences and expectations. It was recognized that there was a wide range of educators' understanding about constructivist professional development (Dobozy, 2012; Loughran, 2013). Respect for tension and differences were critical to understanding challenges of collaborative efforts because of individuals' epistemic assumptions (Alhadeff-Jones, 2012).

In higher education, both organizations and individuals are regularly challenged to improve the quality of learning and teaching through meaningful and continuous professional development (see Botham, 2017; Hassan, 2011; Parker et al., 2008). Over a 3-year period, Chester (2012) developed a peer partnership strategy that was described as having six core features: voluntary participation, cross-discipline pairing of participants, a

reciprocal process of teaching and observing, mandatory training (2 to 3 hours),

individually negotiated focus of teaching elements, and confidentiality of results within

the partnership. Chester used an action-research reflective design with the aim to enhance

reflective practices and to improve teaching quality in five schools. Final

recommendations for long-term implementation included locating program leadership in

communities of practice and embedding training in organizational structures for

individual recognition and further program support (Chester, 2012). Owenby (2011) and

Shagrir (2017) argued that successful learning communities in organizations must be

horizontal in nature and include recognition of power relations, organizational structures,

and common values of adult educators.

   Learning communities that promoted both diversity and created space for

dialogue around teaching practices had positive benefits for improving teaching and

learning (see Cranton, 2016; Kallioinen, 2011; Riveros et al., 2012). Based on a

qualitative case study, Brady (2009) concluded that rather than imposing higher

education experts on practicing high school teachers to improve their classroom practice,

a multi-perspective dialogue that involved experts of various university and college

backgrounds and experience had greater relevance and potential for participants'

learning. Brady stated that conversations with nonauthoritative voices of others brought

fresh perspectives to ongoing practices, promoted the exchange of ideas, and created new

opportunities for collaboration. Increased knowledge and renewed enthusiasm of those

involved in professional development were perceived to positively affect subsequent

classroom experiences with students (Brady, 2009). Brady recommended the need for

additional quantitative evidence of student achievement in relation to educator

involvement in collaborative or innovative learning communities. The requirement of

more quantitative evidence of professional development evaluation was corroborated by

Ebert-May et al. (2011). The results of university science professors' learning in

workshops indicated confusion between educators' perceptions of their learner-centered

teaching and their actual practice (Ebert-May et al., 2011). Findings indicated that

continuous learning and objective feedback are critical components of improving adult

education practices (see Loughran, 2013).

Evaluating effectiveness of teaching and learning within communities of practice

is necessary for improvement, accountability, and standards (see Saunders, 2012; Shagrir,

2012). Ives, McAlpine, and Gandell (2009) posited that successful evaluation of teaching

and learning interventions should be a systemic, collaborative, and follow a discipline-

focused framework. Loughran (2013) suggested that people involved in supporting

professional development required expertise in areas of methodologies, training,

negotiation, facilitating change, consulting, criticizing, and judging. Evaluation involved

conversations about tracking, interpreting data, learning priorities, and using evidence to

support decisions (Loughram, 2013). Additional evaluation options in collaborative adult

learning included mentorship and other conceptual frameworks for assessment (see

Saunders, 2012; Shagrir, 2012, 2017).

Agency, Career Development, and Life-Long Learning

In educational literature, individual teacher agency was a complex concept

because it was often defined in relation to adult learning principles and theories (Knowles

et al., 2005). Knowles (1980) described agency as an individual's desire to shape the context of learning, a key adult learning assumption. Acknowledging a broader definition, O'Meara and Lapointe Terosky (2010) identified agency as one of four interrelated and mutually reinforcing aspects of professional growth. The three other supportive aspects were learning, professional relationships, and commitments (O'Meara & Lapointe Terosky, 2010). Adding to the complexity of defining teacher agency, Fellenz (2016) and Su (2011) included the development of lifelong learning, particularly with change and insecurity. Su hypothesized that the *being* mode of learning, a concept discussed by Heideggar (1978), which promoted a person-focused holistic approach involving ontological learning, was an even more critical part of agency than *having* (delivery) or *doing* (interacting) as related to epistemological learning (italics are the author's emphasis). Su recommended that for the sake of providing balance between mind and body, learners must be encouraged to actively reflect on their construction of subjective meanings of existence in conjunction with knowledge construction and problem-solving abilities. Su argued that agency, an internal power, drives learning throughout life and attending to the "being" mode of learning promotes authentic adult life-long learning. Learners are taught to explore and create, not just to explain and improve (see Su, 2011). Fellenz (2016) stated that educators must reflect on changing technologies, social-economic realities, and ethical circumstances as part of their professionalism. Correspondingly, Webster-Wright (2010) linked agency and authentic learning to the whole life experience of professionals. Kreber (2013) related agency to

responsibility and accountability for professional growth with the greater goal of improving student learning experiences.

Bouwma-Gearhart (2012) and Riveros et al. (2012) posited that initiatives for school improvement would have limited success without understanding teacher agency within professional learning communities. Bouwma-Gearhart stated that more attention be given to the agency of individuals or groups in identifying steps for improvement of teaching activities or programs. Bouwma-Gearhart recommended more administrative support for individual educators that would drive department and institutional changes. Riveros et al. presented evidence that many past initiatives of peer collaboration neglected the essential component of professional practice that included educators' capacity for building meaningful and supportive relationships.

Likewise, Nicoll (2014) commented that failure of educational reform was often a result of organizations' overly simplified paradigm for understanding teaching processes and practices. Parker, Morrell, Morrell, & Chang's (2016) study of professional development and community college faculty revealed that substantial amounts of time, reinforcement, and experimentation were needed to make significant improvements in classroom practices. Hargreaves and Fullan (2013) advised that teachers' understanding of organizational goals was even more important than transformation of organizational structures. Innovative educational organizations were systems that encourage interaction without compromising group or individual identity (see Brooks & Gibson, 2012).

Internationally, teacher agency was also identified as vital to educational change (Crawford, 2010; Hargreaves & Fullan, 2012; Karakhanyan et al., 2012). Karakhanyan et

al. (2012) surveyed 279 Armenian university educators regarding their conflicts in perceptions of institutional modifications. Findings indicated that 97.5% of the faculty had a high capacity and readiness to participate in the change process, but no invitation to assist with planning and processing resulted in reduced ownership and confidence in the validity of the reform. The study indicated that successful education reform required educator involvement throughout educational initiatives; otherwise, superficial attitudes and lack of participation would hinder implementation (Karakhanyan et al., 2012). Crawford (2010) analyzed the relationships between organizational structure and teacher agency in two British universities. Crawford interviewed 36 academics and explored their views regarding influences, attitudes, and behaviors towards change and professional development. The interview results indicated that the academic's professional background and commitment to subject-related professional communities were dominant variables in influencing participation in professional development. Crawford recommended that institutions should create a holistic professional development program by responding to academics' concerns and building professionalism, which included a moral responsibility for themselves and others.

Lebowitz, van Schalkwyk, and Ruiters, (2012) examined the relationship between teacher agency and intrinsic motivation and morality at a university in South Africa. The study's results indicated that the interaction of biography, environmental influences, personalities, and initiatives taken to improve teaching generated a sense of self-fulfillment and agency in the educators. The removal of restrictive rules and recognition of educators' values, skills, and sense of self-worth were compared to the same strategies

used to recognize prior learning of adult learners (Lebowitz et al., 2012). Similarly, Tang and Choi (2009) examined the diverse teaching and life history of five secondary level educators located in Hong Kong. The study examined how experienced educators made sense of continuing professional development within an educational context of increasing competition and a business approach to education. Tang and Choi stated that irrespective of different histories, the educators' professional development was driven by individual integrity and professionalism. Tang and Choi questioned the need for market-oriented professionals in a global economic arena as compared to a transformative teaching profession that invests in social justice and prosperity. Tang and Choi recommended inclusion of educators to shape organizational conditions.

Management accountability and supervision issues were prevalent in research involving teacher agency and professional development (McDonald & Hite, 2008; Miller, Bai, & Newman, 2012). McDonald and Hite (2008) acknowledged that since the mid-1990s, a long-term, single organization career path for educators shifted to multidirectional autonomous careers. Consequently, this change affected the psychological contract of institution loyalty and long-term commitment (see McDonald & Hite, 2008). Three strategies forwarded by McDonald and Hite to accomplish a strong career culture in organizations included promoting informal and formal developmental networks, volunteerism, and alternative forms of peer, group, and e-mentoring. Miller, Bai, and Newman (2012) stated that an adaptive and financially feasible approach to educator career development required a mutually beneficial relationship between employers and employees for current and future assignments. O'Meara, Lapointe

Terosky, and Neumann (2008) recommended similar strategies in that despite socioeconomic changes facing many institutions, academic environments that foster agency gain immediate and long-term benefits because of organizational commitment and increased faculty satisfaction and performance.

Stenfors-Hayes, Weurlander, Dahlgren, and Hult (2010) researched learners facilitating control over professional development and overcoming perceived obstacles to their learning. Semi-structured interviews with 19 medical educators were conducted at individual, departmental, and institutional levels. The identified barriers for professional development included organizational structures that hindered development and change, job insecurity, time limitations, inadequate peer feedback, few intellectual discussions, no incentives, and lack of support from management. The study's results indicated that the organizational level was perceived as the greatest obstacle to educators' learning while the individual level was positively related to motivation and learning (Stensfors-Hayes et al., 2010). Stensfors-Hayes et al. stated that some participants viewed specific factors as barriers while others considered the same factors as opportunities.

Improving teaching and making changes were linked to individual perceptions of the working environment (see Crawford, 2010; Kreber, 2013). Webster-Wright (2010) observed similar results in her studies when participants interpreted constraints in professional learning as a personal problem or as a system problem. Webster-Wright related the dissonance to the holistic nature of professionalism and ontological dimensions of learning. Botham (2017, 2018) reported that inherent intrinsic motivation was the most important factor influencing teachers' engagement in higher education

professional development. Combined with their expertise in subject disciplines, individuals wanted to develop as educators and improve their teaching practices. Extrinsic motivators, such as institutional policies, helped to initiate engagement but did not guarantee success or completion. Botham identified lack of time, workload pressure, conflicting priorities, little department support, and fear of evaluation as key barriers to continuous professional. Informal and flexible professional development opportunities were recommended by Botham to help reduce professors' anxieties about demonstrating or sharing teaching techniques with colleagues.

In conclusion, current professional development literature in higher education revealed evidence of highly contextualized situations. Many studies revealed problems, methods, discussions, and conclusions that indicated multiple options and diversity. Professional development of educators was affected by socio-economic changes, technological developments, and philosophical perspectives on organizational management and educational practices. The literature review indicated the complexity of change and the relationship between stakeholders, individually and collectively. Published research about professional development in Canadian community colleges was sparse. Traditionally, academic research has been the domain of universities while colleges have been focused on applied and vocational teaching and learning.

Implications

The literature revealed that increased complexity and uncertainty in higher education was impacting organizations (Cranton, 2016; Hussan, 2011; Whitchurch et al., 2009). Globalization encouraged transformation in many higher education systems in that

collaboration and competition among providers added complexities to organizations with implications for human resource management (Douglas & Edelstein, 2009; Fletcher, 2007; Gordan & Whitchurch, 2007; Owenby, 2011). Increased diversification of academic tasks in an evolving environment was perceived by educators as threatening or liberating, along with concerns about workloads, stress, and work-life balance (Kreber, 2013; Webster-Wright, 2010). Associated tensions within a changing environment presented additional challenges to human resource professionals, administrators, and educators (Hargreaves & Fullan, 2012). Fletcher (2007) and Hussan (2011) reiterated that the roles of educational professionals were evolving as a result of a knowledge economy in domestic and global markets, and increased managerial responsibilities of academics included commitment to educational quality but also competitiveness of products and services for employment security. National and international economic policies were driving changes in higher education and were influencing the social identity of educators toward knowledge producers for global markets (see Merriam et al., 2007).

In 2013, the Organization for Economic Co-operation and Development estimated that 135 million students worldwide were enrolled in tertiary education, more than double the numbers from 1999. Increases in population and changes in the global labor market were recognized as factors that triggered competitive educational services in higher education. International student markets were viewed as additional revenues of organizational sustainability following significant government budget cuts in education (Colleges Ontario, 2012, 2014). Kennedy (2014) supported the perspective that

fragmented professional development that is not aligned to the needs of educators or institutions will remain ineffective (Chaudary & Imran, 2012; Turner & Gosling, 2012).

Parker et al. (2016) suggested that educators need professional development opportunities that are continuous, experiential, problem-based, and supportive of learning through reflection and dialogue with a variety of colleagues (Brooks & Gibson, 2012; Saunders, 2012). Improvement was a realistic aim of vital individuals who want to change social order, create new environments, and work toward good living (Fellenz, 2016; Lindeman, 2011). A single solution and top-down imposed approach to repair educators and to provide them with knowledge that they do not have, continued the belief that educators were reluctant to change (Bouwma-Gearhart, 2012; Chester, 2012; Riveros et al., 2012). Learning to collaborate between stakeholders was recognized by Teras (2016) as a long process that involved construction of common visions around changes and reforms in program delivery (Musanti & Pence, 2010). Watkins et al. (2012) stated that there were serious concerns that a market-driven sacrifice of time and process sabotaged the goal of building a transformative teaching force when educational organizations were under incredible budget and competition pressures. A symbiotic relationship between professional development and higher education improvement enhanced adult learning (see Sappington, Pacha, Baker, & Gardner, 2012).

Implications, based on the literature search and results of this study, related to community college administrators and professors collaborating to advance professional development programming in the midnorthern region of east central Canada. Initiatives included maximizing the awareness and use of affordable web-based technologies to

respond to the on-going professional development needs of individual professors and the sustainability needs of remote educational institutions. Identification and effective utilization of quality professional learning networks to support the changing needs of the five community colleges in a competitive global economy have the potential to improve teaching, learning, and student success.

Summary

The background information and rationale for the study as related to exploring professional development engagement and perceptions of full-time community college professors at five colleges located in a remote midnorthern region of east central Canada were presented in Section 1. Special terms associated with this project were defined and cited. Current research literature regarding continuous professional development of professors in higher education was reviewed. Issues of rapid change and reform, institutions' economic sustainability, and the need to support students' learning in a global economy were also described as related to the professional development of educators. The guiding research question to address the local problem was stated. Review of the literature included Mezirow's (1991, 1997, 2000) theory of adult transformative learning as the chosen conceptual framework. Problems associated with professional development in local, national, and international higher education institutions were included to indicate the commonality and complexity of describing authentic professional development. The methodology, setting and sample, data collection, data analysis, and project deliverables will be described in Section 2.

Section 2: The Methodology

Introduction

The purpose of this mixed-methods study was to explore the professional development engagement and perceptions of full-time professors working in five community colleges located in a remote, midnorthern region of east central Canada. The problem I studied was how to create faculty development programming that meets both the specific learning needs of individual full-time professors and the operational needs of the community colleges. Surveys were e-mailed to 600 full-time professors as listed in the online 2017 college directories of the five colleges. Volunteer respondents returned 120 surveys over a 5-week period.

Methodology must be appropriate for the problem addressed in a study (Bean, 2011; Dillman, Smyth, & Christian, 2014; Edmonds & Kennedy, 2017); therefore, I used a single-phased, nonexperimental, mixed-methods approach in this study with a concurrent and triangulation design with merged results. A cross-sectional survey design employs a one-time approach to collect data, and descriptive research offers characteristics of an occurrence (Creswell, 2014; Johnson & Christensen, 2017). Nonexperimental research is essential to the field of education; it is a controlled inquiry of independent variables in real-life settings (Johnson & Christensen, 2017). For this study, probability sampling was not practical because of administrative limitations. Creswell (2014) stated that a nonprobability sample involves respondents who are chosen based on convenience, availability, and represent some characteristic the researcher desires to examine. In this type of sample, the researcher cannot say that the individuals

are representative of the population, yet the sample can provide information (see Creswell). Best and Kahn (2006) advised that a sample of volunteers may represent a biased sample and are not representative of a total population. Although valid inferences from a sample may be limited, Creswell stated that good survey research techniques will help to support estimates of population values. Techniques employed in this study included using a comprehensive sampling frame list, piloting testing survey questions and instructions, and following thorough procedures to achieve a large return rate.

I developed the concurrent mixed-methods design for this project from the interaction of the literature review, guidelines about research designs and methodologies, and the research question (see Creswell, 2014; Glesne, 2011; Merriam, 2009; Yin, 2009). The current local, national, and international research literature I analyzed for this study consisted of quantitative, qualitative, and mixed-methods designs. Mixed-methods research has had a logical and intuitive appeal for an increasing number of researchers in education because of its use of induction, deduction, and abduction or inference to investigate a phenomenon (Edmonds & Kennedy, 2017; Onwuegbuzie & Leech, 2006). Proponents of mixed methods have advocated a compatibility thesis that respectfully supports using both quantitative and qualitative approaches in one research study following a philosophy of pragmatism, which endorses practical theory and practice (Edmonds & Kennedy, 2017; Johnson & Christensen, 2017). Triangulation design, the most common approach to mixing methods, provides the opportunity for obtaining different or related data on the same subject (Creswell & Plano Clark, 2008, 2018). The combination of symbols QUAN + qual represent the validating quantitative data model

for this study where both types of data were collected with one survey instrument. Qualitative survey items, often described as add-ons, are not as rigorous as the quantitative data; however, they provide quotes that embellish the survey findings (Creswell & Plano Clark, 2008, 2018). Creswell (2014) stated that mixed methods facilitate an improved understanding of a complex research problem or phenomenon. Hargreaves and Fullan (2012) posited that improving practice in adult education offers the possibility of positive social change.

Mixed-methods research in the social sciences has developed and expanded internationally since the late 1980s (Creswell, 2014). Ayiro (2012) posited that audiences, such as policy makers, practitioners, and stakeholders, in applied fields require multiple forms of evidence and a thorough analysis of quantitative and qualitative data to support superior decision-making. The weaknesses of mixed-methods research include conflicting opinions by methodologists regarding specific procedures and researchers requiring skills in more than one design area (Johnson & Christensen, 2017). One limitation of the mixed-methods approach was the possibility of discrepancies between the quantitative and qualitative findings that may be difficult to resolve (Harwell, 2011; Terrell, 2012). Conversely, Denscombe (2008) commented that variations and inconsistencies should not be viewed as negative aspects of the paradigm. The flexibility and accommodation of communities of practice allowed by mixed methods highlight problem solving and the value of practical learning as compared to the metaphysical principles of epistemology and ontology (Denscombe, 2008). Academic debates about combining the elements of quantitative and qualitative methodologies have been

controversial, but the flexible mixed-methods approach is seen by many experts as a credible, distinctive, and a viable paradigm for research in education (Creswell, 2014; Edmonds & Kennedy, 2017; Harwell, 2011; Johnson & Christensen, 2017; Punch, 2009; Seltzer & Rose, 2011).

For this study, I statistically analyzed quantitative data to measure and generalize the size and frequency of perceptions and behaviors and coded the qualitative data for themes based on individuals' specific insights and comments. The limitations or bias of one kind of data are offset by the strengths of the other (Harwell, 2011; Johnson & Christensen, 2017; Terrell, 2012). The results are more comparable when the same participants respond to quantitative and qualitative questions, and the convergence of results offers additional evidence (Johnson & Christensen, 2017; Plano Clark & Creswell, 2008, 2018). The mixed-methods design was rigorous and suitable for a holistic and multidimensional perspective of learning and teaching as seen through the lens of Mezirow's adult transformative learning theory.

Saris and Gallhofer (2014) asserted that survey research is relevant and important in the social and behavioral sciences. When information cannot be collected from existing records, a survey collects information by asking people questions, while their responses constitute the data to be analyzed (Fowler, 2014; Rea & Parker, 2014). Self-administered online questionnaires have the potential to reach large numbers of geographically-dispersed people using accessible and relatively inexpensive software (Creswell, 2014; Fink, 2013). Since I could not locate a published survey that adequately aligned with the context of midnorthern community colleges and professional

development, I prepared an online survey in the English language to gather data about participants' demographics, perceptions, practices, and comments about resources (Appendix B). Anonymous paper-based questionnaires would have increased confidentiality benefits, but I viewed their distribution and paper costs as excessive and wasteful. Lodico et al. (2010) stated that anonymous questionnaires restrict following up with specific participants to collect additional information or to validate meaning which can be critical in some situations.

In this study, I used SurveyMonkey, a popular online professional program, to collect data because it offered user training, testing capabilities, real-time data, and security protocols. Full-time professors' e-mail addresses were identified through the five college 2017 directories posted on their websites. Although no list of names and addresses can be perfect (Rea & Parker, 2014), college directories are routinely updated to support internal and external communication. Web-based surveys can collect data quickly, but there are limitations associated with sampling, bias toward regular computer users, computer glitches, security protection, and Internet spam (Creswell, 2014; Rea & Parker, 2014). SurveyMonkey's user-friendly, written instructions supported the process of respondents' navigating through the questionnaire, which led to a final submission to a secure server. Skip patterns avoid complex instructions and simplify the process (De Vaus, 2007) and were automatically recorded in the database thus avoiding missing data concerns (see Fink, 2013).

Setting and Sample

Full-time community college professors teaching in the remote, midnorthern region of east central Canada were the target population of this study. Creswell (2014) defined a target population, also identified as a sampling frame, as a group of people with some shared characteristics. Similarities between the five community colleges shaped their development and will affect future institutional planning (see Hicks, Weingarten, Jonker, & Liu, 2013). Compared to the 18 other southern community colleges with enrollments reaching as high as 23,000 full-time students, the five midnorthern colleges serving 1,000 to 5,000 students share distinct challenges because of the region's lower population density, greater distance from large markets, and limited economic community development and support (Ontario Colleges, 2013). The midnorthern region also included one French language college, but I did not select it for inclusion in this study because of the significance of cultural diversity and the complexity of language translation. Student demographic similarities between all Canadian government-subsidized community colleges were identified as 23 years old being the average age of applicants, 53% of first year students were female and 47% were male, and 42% of students came to college directly from secondary school (Government of Canada, 2013). Zarifa, Hango, and Milan (2018) stated that individuals from the northernmost regions of Canadian provinces experienced difficulties accessing postsecondary studies because their locations affected socioeconomic issues including family dispositions and educational aspirations.

Similar to selecting a research design, a sampling strategy must logically relate to the research question of the study (Bazeley, 2013; Creswell, 2014; Edmonds & Kennedy, 2017; Merriam, 2009; Punch, 2009). Surveys are designed to produce statistics about a target population and are suitable to assess trends, characteristics, attitudes, and practices (Creswell, 2014; Fowler, 2014; Rea & Parker, 2014). Rea and Parker (2014) asserted that the advantages of the sample survey technique are the savings of time and cost, and the fact that the characteristics of individuals and communities are collected in a relatively unbiased and scientific manner. My eligibility criteria for the selection of participants for this study were professors who had full-time academic contracts, defined as a maximum of 38 weeks of teaching and employment benefits (Ontario Colleges of Applied Arts and Technology Academic Employees Collective Agreement, 2017).

I sent invitations to participate in the study through e-mail to 600 full-time faculty members listed in the online 2017 college directories. One hundred and twenty surveys were returned, yielding a 20% response rate. Creswell (2014) stated that the response rate to represent a population should be as high as possible, yet Edmonds and Kennedy (2017) estimated that a 15% to 20% return rate for external surveys can be expected and are realistic, particularly for dissertations. Johnson and Christensen (2017) warned researchers that they must be aware that a sample might be biased because the participants who do not respond may be different from those who do respond. Reio (2007) stated declining survey response rates, despite systematic procedures to maximize participation, should not always be interpreted as nonresponse bias.

Based on a 95% confidence level, the recommended sample for this study was 248 faculty (see Johnson & Christensen, 2017). The sampling error was estimated as 5% (see DSS Research, 2015). This study had a shortfall of 128 survey responses, despite the 2-week survey extension time and a reminder message. Sampling error or bias is inevitable despite a researcher's effort to assemble a good sample (Fink, 2003; Fowler, 2014). Fowler (2014) noted that sample size precision increases up to 150 observations, followed by modest gains beyond 200. I considered the stratified sampling of the five colleges but later rejected this idea because of the requirement of approximately 100 participants in strata and substrata (see Rea & Parker, 2014). One college in the study had fewer than the minimum recommended number of participants, and participant confidentiality needed to be maintained.

I used certain people and locations in this study because they met the criterion for inclusion (Dillman et al., 2014; Palys & Atchison, 2008). Examining the topic of professional development engagement had greater credibility with data collected from full-time professors as compared to part-time or short contract professors who were, in most cases, less familiar with the community college culture and environment. Other characteristics of the selected sample were that all full-time professors were unionized and shared similar employee benefits, including professional development and workload guidelines, under the Academic Employees Collective Agreement (Ontario Colleges of Applied Arts and Technology, 2017). Shared contract language and documented expectations of professional development reduced misunderstandings of language and meaning. Prioritizing quantitative data over qualitative data and including critical self-

reflection in the final research report helped me to control researcher bias (see Johnson &

Christensen, 2017).

Researcher-Participant Relationship

A researcher-participant relationship within the community college system was

based on my 30 years of full-time employment and union membership as a professor at

one midnorthern college in east central Canada. I did not work as an administrator or as a

supervisor during this time. Despite a natural bias toward the needs of faculty members,

my master's degree in educational administration further developed my interest and

knowledge of college operation and governance issues. Over the length of my full-time

career, I was active in many local, regional, and provincial professional development

conferences and curriculum projects. In June 2015, I was awarded a Recognition of

Excellence award from my employer's board of governors. This acknowledgement was

based on colleagues' input and annually presented to one recipient. Although I retired

from full-time teaching in 2016, former colleagues were encouraging of my doctoral

project study. My retirement provided greater objectivity to the researcher-participant

relationship as it reduced employer loyalty and offered me more time to focus on broader

professional development concepts.

Measures for Protection of Participants

Survey designs, unlike experimental research, do not involve treatment to

participants (Creswell, 2014). Participant population for this study did not include any

vulnerable or protected populations as identified by The National Institutes of Health

Office of Extramural Research. Approval from Walden's Institutional Review Board

(IRB) was given, 09-07-16-0223368, with the expiry date of September 6, 2017. IRB approval was extended to August 9, 2018. Permission from the five participating colleges' administrative teams was approved and submitted to IRB before data were collected.

All community college participants invited to complete the survey provided an informed consent with the survey submission. Participants' information is protected in private locked computer files and filing cabinets in my home and will be destroyed after 5 years as stipulated by Walden's IRB. No other person had access to participants' identification. Rights of participants were protected throughout the study. According to Creswell (2014), participants should not be knowingly put at risk and must comprehend the purpose and procedures of the research. They must participate as volunteers and understand that they can withdraw at any time (Lodico et al., 2010). Confidentiality and ethical considerations were followed recognizing the complexity of language and the possibility of damaging consequences to individuals (see Glesne, 2011).

Online surveys have guidelines for guarding confidentiality across three communication links: researcher to participant, participant to web server, and web server to surveyor (see Fink, 2013). I communicated my effort in all correspondence to protect participants' privacy and assure confidentiality of responses. Informed consent and discretion were facilitated throughout the study by thorough explanations of the procedures, a description of risks and benefits, offers to answer questions, and statements that a participant may withdraw from the study without negative consequences (see Fink, 2013).

I completed training from The National Institutes of Health Office of Extramural Research of the course *Protecting Human Research Participants*. The date of completion was 12/08/14 and certification number is 1632950 (Appendix C). Other research ethics training involved Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans Course on Research Ethics TCPS 2: Core (Appendix D). This was completed on July 15, 2016, as a requirement of Canadian colleges and universities.

Context and Concurrent Strategies

No published survey was located that adequately aligned with the context of midnorthern colleges and professional development. Over 100 published and peer-reviewed articles did not present a survey that would be suitable for this study. Other web-based surveys reviewed included the 2013–2014 faculty professional development survey from the Higher Education Research Institute at the University of California, Los Angeles, and the 2009 Organization for Economic Cooperation and Development Teaching and Learning International Survey. Both surveys offered examples of question design and attractive visual layouts that encouraged participant response (Dillman et al., 2014). King's (2009) modified forms of the *Learning Activities Survey* were also examined, but their orientation was focused on finding evidence of transformative learning in a variety of environments.

Most published surveys regarding professional development had a specific university or secondary school orientation that did not fit the multi-discipline programs and complexities of midnorthern colleges in east Canada. Lodico et al. (2010) remarked that because researchers study changing issues and behaviors, they often create new

instruments or alter existing surveys. Rigor determines to what extent different types of research contribute to knowledge around a specific topic (Ercikan & Roth, 2011). Fowler (2014) recommended that a special purpose or customized survey should be prepared by the researcher to ensure that all data needed are collected and analyzed.

I designed and tested a customized questionnaire, representing the unique context of midnorthern colleges. Survey questions linked to the guiding research question and to this study's literature search. Results identified agency, collaborative relationships, subject expertise, digital technologies, and pedagogy as key variables in the professional development of educators. I designed the survey questions to collect professors' demographic data, self-reported levels of engagement in professional development, and perceptions of resources and processes. Although the survey did not have proven reliability, reducing survey error demanded extensive planning around questionnaire design, pilot testing, implementation, and data analysis (Dillman et al., 2014). Well-prepared surveys generate standardized data that can be computerized for statistical analysis and offer the advantage of replication at another time or location (Rea & Parker, 2014). Other benefits of survey research include convenience and confidentiality for the participants. A questionnaire can be completed within a reasonable time frame, and there is no requirement to contact the researcher. Conversely, lack of researcher involvement may reduce response rates if there is participant confusion about the meaning of questions even with contact information (see Rea & Parker, 2014).

I rigorously pilot tested the survey to improve all aspects of the experience. De Vaus's (2007) checklist of question wording was followed including principles of

question design: reliability, validity, response rate, meaning, and relevance. Measurement instruments must always consider reliability and validity as researchers want reliability coefficients to be positive and that the surveys will give information that is wanted (Johnson & Christensen, 2017). In a mixed-methods context, triangulation validity was defined as the skill of the researcher to accurately describe significant conclusions, deductively and inductively, from the study's data (see Creswell & Plano Clark, 2008, 2018). Identification of potential threats to validity during data collection and analysis were documented and addressed. I logged observations and threats to validity in confidential notebooks. Notebooks and all other project data are contained in locked cabinets and in a secure password-protected computer system located in my home office.

Pilot Testing

Upon gaining Walden University's IRB approval and participating colleges' IRB approvals to collect data, the survey and processes were pilot tested by 12 retired midnorthern college professors. Fink (2013) advised that missing data must be expected in survey research, so the researcher must pilot test the survey and make adjustments as required to ensure relevancy and clarity of the questions. Pilot testing the survey, prior to undertaking the main data collection, helped to ensure that correct types of data would be gathered as demonstrated in the answers (see Blair, Czaja, & Blair, 2014; Creswell, 2014; Lodico et al., 2010). For reliability, unanswered or misunderstood questions were reviewed and adjusted (see Fink, 2013). Supporting documentation, directions, formatting, and ease with which participants answered questions were tested and retested.

Bean (2011) asserted that pilot testing and careful question design should decrease the possibility of misunderstanding or reluctance to respond.

Pilot testing participants shared characteristics of the target population and were readily accessible by e-mail and telephone. Each participant received a friendly e-mail message and was asked to complete, within 2 weeks, the survey and the systematic rating form, on a volunteer basis (Appendix E). Some participants preferred to give their feedback with margin notes, e-mail messages, and telephone conversations, so Cronbach's alpha was not utilized at this time to estimate the reliability of the survey. I made effort to listen to participants, record their suggestions in writing, make survey changes, and confirm satisfaction with adjustments. Survey respondents of the pilot testing received a short, electronic message of appreciation in recognition of their time and support.

Survey Distribution and Collection

Five community colleges' vice-presidents were notified in writing for gaining access to external institution participants. Upon completion of all IRB requirements and survey revisions, a study invitation letter was e-mailed to 600 full-time professors. Information about the study's importance, time requirement, and the benefits of participation were outlined in the e-mail. To help motivate participant involvement, I encouraged professors to request a final summary of the findings (see Creswell, 2014). Twelve direct requests for final results, with encouraging words of support, were received through e-mail messaging. The second participant contact included an electronic cover letter and consent information that further explained confidentiality and that a participant

may withdraw at any time without affecting workplace responsibilities (see Lodico et al., 2010).

Participants were asked to complete the web-based survey within a 3-week period. This was considered as a reasonable amount of time for survey completion (see Creswell, 2014; Lodico et al., 2010). Subsequently, a follow-up third e-mail was sent as a message of appreciation to respondents and a friendly reminder to nonrespondents. The communication was to reinforce the survey's significance and need for the most accurate and reliable data from professors (see Creswell, 2014). To improve data accuracy, my home telephone and e-mail address were presented in all participants' correspondence for question clarification (see Creswell, 2014). Returned surveys were tracked and recorded, with no personal identifiers, to further support data analysis results (see Creswell, 2014; Dillman et al., 2014). I conducted the procedure of wave analysis on all survey questions to check for response bias to see if answers were different from the initial week to the final week of the data collection. According to Creswell (2014), response bias is even more important than a low response rate. Initial estimated time for the survey's data collection process was three weeks with an extension of 2 weeks, as suggested by Creswell, to increase the number of survey responses.

The survey, totaling nine questions and requiring approximately 15 minutes to complete, was aligned with the guiding research question to support validity and credibility. Rea and Parker (2013) recommended that online surveys be conservative in length because of the popularity of this tool and method. The three-step procedure recommended by Saris and Galhofer (2014) to operationalize concepts and design

questions was followed. Demographic questions and personal, attitudinal, and behavior questions were chosen based on a comprehensive review of research literature (see Lodico et al., 2010). For this study, the nominal and ordinal scales were used which linked to statistical manipulation of the data that were most suitable for the information being communicated (see Johnson & Christensen, 2017; Johnson & Kuby, 2012). Nominal variables name elements of the population and ordinal variables incorporate ordered positions or rankings. A nominal scale is the simplest form of measurement and is used to categorize or identify people, objects, or types that cannot be quantified. An ordinal scale of measurement is a rank-order scale that is used to determine higher or lower variables of interest (Johnson & Christensen, 2017). Question 1 identified if the respondent was a full-time community college professor and the survey automatically closed if the qualification was not met. Question 2 included multiple answers with a Likert-type scale and indicated respondents' support for informal and formal professional development preset options. Question 3 was a ranked question on the importance of why professors continue with their professional development. Question 4 included multiple answers with a Likert-type scale and indicated frequency of professional development engagement. Question 5 was a qualitative question on identifying perceptions of resources that significantly influenced short and long-term planning. Question 6 included multiple answers with a Likert-type scale and preset statements about collaboration, online learning, face-to-face communications, informal learning, responsibilities, and satisfaction with individual engagement in professional development. Questions 7, 8, and

9 collected demographics to determine trends or patterns in characteristics such as gender, age, and midnorthern community college teaching experience.

Data Analysis and Validation Procedures

Nonexperimental research cannot provide proof for causality (Creswell, 2014). In nonexperimental research, the independent variables are not under the researcher's control, yet descriptive information and analysis indicating trends in a population can make a contribution to exploring real-life or naturally occurring phenomena (Johnson & Christensen, 2017). For this nonexperimental study, the dependent variable, influenced by the independent variables, was the community college professors' level of engagement in professional development. Independent variables included age, gender, teaching experience, learning opportunities, and influences from other people or agencies.

Three steps for analyzing questionnaire data were followed: identifying response rate and response bias, analyzing data to identify trends, and reporting results (see Creswell, 2014). An integrative strategy for mixed-methods data analysis was to transform quantitative or qualitative data into the other to facilitate objective statistical or thematic analysis of both data types (Caraclli & Greene, 2008; Fink, 2013). To analyze the collected data, I used descriptive statistics to identify general trends and to answer the mixed method question in the study. Data were analyzed to develop a demographic profile of the sample (see Creswell, 2014). Statistics included frequencies, percentages, measures of central tendency, and measures of variation, such as range and standard deviation (Creswell, 2014; Lodico et al., 2010). I reported descriptive statistics for each question of the survey and followed presentation guidelines as recommended by Fink

(2013) and Howell (2013). Cronbach's alpha, or coefficient alpha, was calculated on two Likert-scale survey questions with Statistical Package for the Social Sciences (SPSS), Version 24, software. Results were .73 for Question 2, and .71 for Question 4. According to Johnson and Christensen (2017), Cronbach alpha must be greater than or equal to .70 for general purposes of measuring internal consistency. The other survey questions examined multidimensional or heterogeneous aspects of professional development and were not amenable for Cronbach alpha calculations.

While descriptive statistics and analysis of data led to findings (see Creswell, 2014; Lodico et al., 2010), I used inferential statistics to further explore the characteristics of the entire population or parameters based on the sample (see Howell, 2013). Johnson and Christensen (2017) described inferential statistics as using the laws of probability to make inferences and draw conclusions. Rea and Parker (2014) recommended the use of contingency or cross-tabulation tables to add explanatory dimensions to frequency distributions of collected survey data, chi-square test of significance to make inferences based on enumerated data, and Cramér's V measure of association. Chi-square test for contingency tables was employed to determine whether relationships observed were statistically significant (Johnson & Christensen, 2017). Chi-square test identified if the findings were generalizable to a full population or the result of sampling error. Measures of association indicate the strength of the relationship between two or more variables and whether specific findings merit reporting (Rea & Parker, 2014). The inferential statistic question was, Are the described relationships between variables in the contingency table statistically significant? The null hypothesis will state

that the variables are not related in the population from which the data were selected. The alternative hypothesis will state that the variables are related in the population.

Response rate and response bias are required in reporting data analysis (Creswell, 2014). Online survey data are automatically entered into a database, and most professional programs, including SurveyMonkey, have routine validity checking and a validation function (see Fink, 2013). Researchers must also double-check for coding errors and look for inconsistencies (De Vaus, 2007). Validity in quantitative studies means that the researcher can make inferences from the sample results to a population, and reliability means that, even with time, scores are dependable and secure (see Creswell & Plano Clark, 2008, 2018). Clean data allow other researchers to obtain identical results (see Fink, 2013). Generalizability is central to scientific research in education, and patterns across groups and time are sources of generalization (Bean, 2011; Blair et al., 2014; Dillman et al., 2014).

Glesne (2011) posited that a researcher must demonstrate trustworthiness of data in a study by acknowledging the limitations, focusing on guiding research questions, and setting the context. Online surveys are usually programmed so that the participants must answer one question before moving on to the next. This may be viewed as an advantage over a paper questionnaire, but it may be seen as coercive and unethical (Fink, 2013). For example, participants may enter misleading information to be able to continue to the next question. Outliers, identified by the statistical program's built-in checks, must be cautiously handled case-by-case (Fink, 2003). A researcher's choice of statistic is based on how efficient the statistic functions as an estimator of the parameter and why

particular measures of central tendency and variability are viewed as more helpful than others (Howell, 2013).

I employed Microsoft Word software to input, code, and summarize the qualitative data. I maintained tabulated notebooks to record details as related to survey distribution and response dates, questions from participants, and other data management issues. My critical reflective journaling included daily thoughts and processes for further analysis and interpretation. Since credibility of the qualitative data parallels the criteria of validity in quantitative research, methods must clearly describe the research setting and participants including the collection of multiple sources of data (see Lodico et al., 2010; Terrell, 2012). Replies and comments were coded, and I analyzed content to find common ideas or themes in the participants' open-ended responses (see Fink, 2013). Qualitative analysis was complex because I filtered the responses through understanding of the participants' intentions (see Fink, 2013). To help ensure reliable data, I completed a second and third coding cycle over a 2-week period. Fink (2013) recommended a second coding at least one week after the first coding so that the two sets can be compared. I examined if the quantitative and qualitative databases converged and demonstrated consistent results or diverged and showed contradictory findings. My conjoint analysis of quantitative and qualitative data provided a greater understanding of the issues under study (see Creswell, 2014).

Findings

I used mixed-methods research design, based on a pragmatist philosophy, for this single-phased study. Intramethod mixing uses a single method of data collection to utilize a combination of qualitative and quantitative data (Johnson & Christensen, 2017). Triangulation helps researchers converge results and findings to validate data (Edmonds & Kennedy, 2017). To improve rigor and credibility in nonexperimental research, the technique of control I used was to restrict the research study to a particular subgroup by holding the extraneous variable constant thereby limiting generalizability or external validity (see Johnson & Christensen, 2017). In this study, mixed-methods techniques included quantitizing qualitative data and qualitizing quantitative data (see Johnson & Christensen, 2017). I converted qualitative data into numerical codes and counted, and quantitative scales were merged into groupings. I organized and reported results in the following order: respondents' demographics, one qualitative open-ended question, and four quantitative questions, all based on the guiding research question:

What is the relationship between full-time professors' level of engagement in professional development and their perceptions of resources and processes that improve teaching and learning?

Strategies used for this study encompassed data reduction, visual joint displays, transformation, correlation, and consolidation. Multiple sources of evidence strengthen results in educational research (see Creswell, 2014; Johnson & Christensen, 2017). Johnson and Christensen (2017) determined that the fundamental principle of mixed research requires the researcher to carefully combine qualitative and quantitative

methods, procedures, and concepts to produce an overall design with divergent, convergent, and complementary strengths, devoid of overlapping weakness. Johnson and Christensen described analytical procedures in mixed data analysis as data comparison of both qualitative and quantitative findings, ending with coherent data integration.

Analyzing survey data also involved issues of adjusting for survey item nonresponse. Fowler (2014) presented two options: elimination of respondents from the analysis or estimation of answers. I chose the first option for this study based on guidelines that when item nonresponse is less than 5%, there is minimal distortion in the estimates (Fowler, 2014). Fowler stated that when statistics are reported using only those who answered the question, the result is supposing that responders and nonresponders are similar.

During a 5-week period, 120 completed surveys were received, yielding a 20% response rate. Within the first 3 weeks, 101 responses were returned. One reminder message was sent out by e-mail, and it generated 19 more completed surveys over a 2-week period. Although I followed preplanned procedures and strategies to encourage a high return rate of the survey, the response rate was lower than I had anticipated. Creswell (2014) posited that sensitive survey questions may not represent respondents' views, leading to bias in response. Although question sensitivity did not arise in pilot testing of the survey, perhaps some respondents were reluctant to identify their level of engagement in professional development. An incentive to encourage responses, other than appealing to professional interest, may have helped, but additional expenses were not available for this study. Lodico et al. (2010) remarked that Internet survey response

rates vary considerably, typically 30% or lower, and are influenced by purpose, relationship between participants and researcher, and subject. Nevertheless, Creswell (2014) posited that response bias is more critical than response rate. To prevent reactivity to assessment or social desirability affecting respondents' answers, I did not approach administrators and union representatives to promote the survey to professors within their colleges. All questions were examined for wave analysis to compare data changes from early respondents to final respondents, but I felt that the qualitative data offered the best evidence because of direct individual responses as compared to preset questions (Table 1). According to Creswell, final week responses are considered as close to nonreturns as possible. If final responses are overly positive or negative as compared to the first week returns, bias may exist. Analyses of concepts were coded into themes to make comparisons and to identify patterns (Edmonds & Kennedy, 2017). Weeks 1–3 and Weeks 4–5 responses for Questions 5 were similar in prioritizing themes throughout the survey return period and therefore representative of the sample. Edmonds and Kennedy (2017) stated that timing of measurement was also a major threat to the validity of the outcome due to conditions that cannot be always controlled by a researcher. The first e-mail introducing the study was sent in the third week of the winter semester in an attempt to respect professors' start-up workloads and in anticipation of mid-term student assessments in Week 8.

Table 1

Wave Analysis: Frequency of Professional Development Themes (Survey Question 5)

Themes	Weeks 1–3 f	Weeks 4–5 f	Total f
Individualized/customized plan with continuous support	36	11	47
Funding: resources, conferences, & industry	35	11	46
Technology training: hardware & software	26	7	33
Communication: internal & external faculty	17	3	20
Local teaching & learning methods	12	3	15
Supportive communication with administration: vision & guidelines	11	3	14
Total	134	41	175

Note. Themes are listed in descending rank order based on a combined total of responses.

Demographic Analysis

Specific college location of respondents was intentionally not gathered as a step to protect the confidentially, particularly for those employed by smaller colleges. Creswell (2014) recommended that when survey researchers analyze data, they should be cautious about reporting small subsets of results that inadvertently reveal specific individuals. Therefore, demographic data were presented as representing the combined five colleges.

Survey Question 7

Survey Question 7 was designed to gather data regarding years of teaching experience within participants' present community college. The three largest groups for

years of teaching experience were 10–14 years at 31.7%, followed by 15–19 years at 20%, and 5–9 years at 18.3% (Table 2). Participants' community college years of teaching ranged from fewer than 4 years to over 30 years. Midcareer (10–19 years) and those with 20+ years, 51.7% and 20.9% respectively, had a combined total of 72.6% which indicated that the majority of the sample population had at least 10 or more years of teaching in the college system. Those with 0–9 years represented 27.5% of the sample.

Table 2

Present Community College Teaching Experience (Survey Question 7)

Years	f	%
0– 4	11	9.20%
5–9	22	18.30%
10–14	38	31.60%
15–19	24	20.00%
20– 24	9	7.50%
25– 29	8	6.70%
30+	8	6.70%
Total	$N=120$	100%

Survey Questions 8 and 9

Findings for age groups of respondents, from highest frequency to lowest, indicated that 46.7% of respondents were 50–59 years, 25% were 40–49 years, 18.3% were 60–69, and 10% were 30–39 years. There were no respondents under the age of 29 years (Table 3). Interestingly, 90% of respondents were 40 years and older; 65% were 50 years and over. Correspondence between age demographics and years of teaching

indicated a mature and experienced sample: 72.6% had 10 or more years of teaching experience.

Survey results for gender consisted of 65 female respondents (54.2%) and 55 male respondents (45.8 %) (Table 3). While data were recorded separately by gender, there was only an 8.45% difference in responses by gender; therefore, gender data were presented as a whole and differences are only referred to in those areas where more substantial distinctions exist. No published data were available for comparison of gender representation within the community college system and survey results.

Table 3

Age and Gender of Survey Respondents (Survey Questions 8 and 9)

Age Groups	f	Female	Male	%
19 and under	0	0	0	0%
20–29	0	0	0	0%
30–39	12	7 (58.30%)	5 (41.70%)	10.00%
40–49	30	18 (60.00%)	12 (40.00%)	25.00%
50–59	56	32 (57.00%)	24 (43.00%)	46.70%
60–69	22	8 (36.40%)	14 (63.60%)	18.30%
70+	0	0	0	0%
Total	$N = 120$	65 (54.20%)	55 (45.80%)	100%

Qualitative Analysis

Survey Question 5

Johnson and Christensen (2017) posited that defensible qualitative research must be credible and trustworthy. Accurate interpretive validity or emic validity requires qualitative researchers to understand respondents' perspectives and to provide a valid

account (Creswell, 2014). Verbatim involves the respondents' actual language, dialect, and personal interpretations. Low-inference descriptors or respondents' exact words in direct quotations provide interpretive validity in qualitative research (Johnson & Christensen, 2017). Researcher bias, another threat to validity, may be counteracted by continuous critical self-reflection and journaling of assumptions and predispositions that affect interpretations.

In Question 5 of the survey, professors were asked to identify resources that they believed would support their long-term professional development planning and improved teaching and learning. Qualitative data, textual and open-ended, facilitated the examination of constructs at a deeper level (Edmonds & Kennedy, 2017). Responses ranged from one word to 10 sentences in length. In total, there were 93 responses for this question with 27 skipped responses. Despite pilot testing of the survey questions, one respondent commented that Question 5 was confusing which may have been an issue shared by other non-responders.

Question 5 was the only survey item where respondents were asked to formulate and record an opinion in words as compared to the shorter multiple choice checking or ranking questions. Time limitations, based on perceived faculty workloads and personal responsibilities, were frequently cited as an issue in higher education professional development literature (see Botham, 2017; Fellenz, 2016; Webster-Wright, 2010). With the goal of increasing survey numbers by offering confidentiality and anonymity to the volunteers, I chose to not track e-mail address identifiers. Therefore, I could not follow-up on nonresponders which is a limitation of the study. Wave analysis (Table 1) indicated

that responses between early and late responders were similar. Creswell (2014) posited that final week responses are considered as close to non-returns as possible. Creswell stated that if final responses are overly positive or negative as compared to the first week returns, bias may exist. Weeks 1–3 and Weeks 4 –5 responses were similar in prioritizing themes throughout the survey return period and therefore representative of the sample.

Initially, responses for Question 5 were categorized inductively using structural and *in vivo* coding: first phase into 17 different theme groups, second phase reduced to 10 groups, and third phase reduced to six groups (Table 4). Structural coding applies a conceptual phrase to a segment of data from multiple respondents that relates to the specific research question; in vivo codes use the language of the respondents (Johnson & Christensen, 2017). Overlapping codes, or cooccurring codes, were integrated with closely related concepts during the first phase coding of data. Although respondents perceived funding for conferences as distinct, the naturally overlapping code of funding would realistically apply to the five other themes as part of an organization's financial management of resources. In the second phase of coding, I identified frequency and themes (see Johnson & Christensen, 2017).

Table 4

Structural Coding and Integration of Themes (Survey Question 5)

Phase 1	Phase 2	Phase 3
• Continuous or alternative scheduling • Individualized/customized plan with supports • Time	• Continuous or alternative scheduling • Individualized/customized plan with supports	• Individualized/customized plan with continuous supports (f = 26.85%)
• Conferences/Industry • Access to resources • Contact with other colleges • Financial support/money	• Funding resources • Funding conferences & industry training	• Funding: resources, conferences, & industry (f = 26.28%)
• Update computer equipment • Update technical skills	• Technology training: hardware & software	• Technology training: hardware & software (f = 18.86%)
• In-house faculty communication • External faculty communication	• Communication with faculty: internal & external networking	• Communication with faculty: internal & external networking (f = 11.43%)
• In-house teaching & learning • Local resources	• In-house teaching & learning • Local resources	• Local teaching & learning resources (f = 8.57%)
• Administrative support • PD listings/options • Approval process • Vision & guidelines	• Access to PD guidelines • Supportive communication with administrators: vision	• Supportive communication with administrators: vision & guidelines (f = 8%)

Note. PD = professional development. Final phase themes are listed in descending rank order of percentages.

Individualized or customized professional development. Data from 93

respondents about individualized or customized professional development resources

showed a frequency of 47 out of 175 concepts or 26.85% (Table 4). Respondents

identified that weekly scheduled time to support continuous professional development,

both face-to-face and online, would be supportive. They also requested help with

accessing free resources and establishing personal and professional learning networks.

Respondents' desired accredited, preapproved, and funded education learning and theory

courses or programs at both college and university levels. Additional provisions included

long-term individualized professional development plans that align with a college's

vision, college-supported mentorship for individuals with particular needs and interests,

and administrative encouragement and approval to attend significant opportunities for

professional development during a teaching semester. "I cannot always take advantage of

professional development opportunities that happen outside of my city during the

scheduled semester," wrote a survey respondent. Several respondents requested a

professional development tracking system for individuals' goals, timelines, completions

(credit and non-credit courses), requests, rejections, and routine reminders (e.g., biannual)

to maximize the contracted 10 professional development days. Respondents commented,

"I have been rejected for professional development with regularity," and "[Professional

development] seems to be a mystery or can vary depending on the individual." A

recurring request from survey respondents was for administrators' recognition of

limitations and barriers faced by northern college professors when accessing relevant

opportunities and the need for "less red tape when applying [for professional

development]." Overall, the majority of respondents suggested practical solutions to enhance professional development while recognizing financial constraints.

Funding of resources, conferences and industry. Data from 93 respondents about accessing funding for improving professional developments showed a frequency of 46 out of 175 concepts or 26.28% (Table 4). Funding was an overlapping theme as it relates to most institutional activities, but it is significant when examining trends, behaviors, and attitudes. Comments centered around the need for increased institutional budgets to support innovative and effective professional development opportunities and networking. Specific examples involved complete or partial funding to access professional conferences or industrial training in provincial, national, or international locations. One respondent wrote, "I live in Northern Ontario and travel south makes many opportunities too costly." A second respondent remarked that "to stay within budget, one has to plan for activities that are virtual or close to home, which are helpful but do not always directly target my professional development needs." It was suggested by one respondent that an annual allowance for each professor would help to ensure equity, improve planning, and reduce disappointments. High quality professional development opportunities were recognized by respondents as significant for their learning, but registration fees, travel expenses, teacher replacements, and other costs triggered comments of discouragement. One respondent remarked that "most requests for PD meet with a *no* response."

Assessing and learning new technologies. Data from 93 respondents about learning new technologies to improve professional development showed a frequency of

33 out of 175 individual comments or 18.86% (Table 4). Resources that were identified as significant for supporting professional development included internal and external community college databases of preapproved online courses (both free or tuition based) and college-level teaching and learning resources. "Continuous learning of new technology…the way of the future," stated one respondent. Regularly scheduled in-house software and hardware workshops at basic, intermediate, and advanced levels were reported as critical needs, including training of video production and mobile applications. "New technology requires a working knowledge!" stated one respondent. "I feel I need to learn more about online learning and using updated technology that is suitable for the learners," wrote a second respondent. Mentorship and professional networking opportunities were highlighted by respondents and captured in one respondent's request for "online resources, colleague networks and mentorship."

Communication with internal and external faculty. Data from 93 respondents about communicating with internal and external faculty members to improve professional development showed a frequency of 20 out of 175 concepts or 11.43% (Table 4). Comments focused on faculty-led teaching and learning centers to support systematic development and communities of practice, mentorship options, face-to-face and online networking within and between colleges, resource sharing, and participation in annual or biannual provincial meetings with those who teach similar program content, specialty areas, or trades. A survey respondent commented, "A personal network would significantly influence my professional development because of the knowledge and experience inherent in such a group." Another respondent stated that "the most effective

professional development for me is being face to face with other educators, especially people from other institutions."

Local teaching and learning resources. Data from 93 respondents about local teaching and learning resources to improve professional development showed a frequency of 15 out of 175 concepts or 8.57% (Table 4). Respondents emphasized the importance of supporting and tracking both formal and informal professional development such as indepth learning opportunities with community organizations. Feedback stated the need for continued investment of accredited and systematic in-service teaching programs with practical resources and hands-on learning techniques such as classroom management, student motivation, special needs, flipped learning, and video conferencing. "Being aware of new technologies and how to use them would greatly enhance my teaching abilities and my students' learning abilities," said one respondent. Respondents identified the need for ongoing research and discussions about teaching trends, social changes, and student needs as related to health issues and diversity to holistically support a new generation of learners. Managing change was viewed as a daily challenge. One respondent succinctly stated that "industry is changing and keeping up to date with current developments is difficult."

Supportive communication with administration. Data from 93 respondents about communicating with administration to improve professional development showed a frequency of 14 out of 175 concepts or 8% (Table 4). Respondents requested verbal encouragement from senior administrators, particularly from vice-presidents academic, and documented professional development guiding principles and expectations that align

with a clearly defined college vision. Comments included the need for open and transparent student success rate analysis, a variety of practical and accessible workshops to encourage teaching and learning innovations, and 3 to 6 months of advanced notice of professional development opportunities to assist with systematic and long-term planning. Increasing professional development budgets and resources were mentioned as critical in supporting quality services. "Time and money are always a barrier to professional development," replied a respondent.

Role of Researcher in Qualitative Studies

Johnson and Christensen's (2017) warning of researcher bias in qualitative studies directed me to engage in critical self-reflection and monitor personal biases and assumptions while working to accurately interpret research participants' viewpoints. Multiple reading of participants' responses, along with categorizing, coding, reducing, and reporting themes, was a process of learning the data. As a former community college full-time professor of 3 decades, it was not surprising to observe the overlapping theme of funding as it related to many aspects of professional development resources and planning. Remarkably, the majority of participants' responses indicated a sensitivity to budget limitations and the need to prioritize college resources. Statements were often prefaced with comments to ensure a high quality of educational services to benefit students. Process-oriented verbs such as "exploring, building, changing, creating, engaging, and coordinating" dominated respondents' language descriptors that related to respondents' self-directed learning and collaboration. Teacher-as-learner and teacher-as-facilitator assertions indicated respondents' awareness of responsibilities, needs, and

teaching strategies. Merriam (2009) stated that qualitative researchers must assess their assumptions as related to an ever-changing reality that cannot be objectively measured. Therefore, validity is a goal that is relative to the purpose and circumstances of the qualitative research.

Quantitative Analysis

Survey Question 2

In Question 2, respondents were asked to indicate the degree to which they supported five closed-ended statements about informal and formal professional development. This question was placed early in the survey as it provided preset options based on typical responses for broad issues in the research literature: agency, collaboration, and career development. Creswell (2014) stated that a practical survey design encourages individuals to answer questions and facilitates data analysis. The popular Likert quasi-interval scale was familiar to most educators, and the survey-friendly software simplified responding with a quick point-and-click action. Several themes emerged from the data analysis: teaching effectiveness, continuous learning, networking, and career satisfaction. Chi-square test for contingency tables showed no relationship that was statistically significant for all five subquestions. Survey subquestions are listed in descending rank order based on a combined total percentage of Agree and Strongly Agree responses.

1. Professional development improves my teaching effectiveness. Participants responded about their perceptions regarding professional development and improving teaching effectiveness. Combined scale results indicated 93.33% agree, 5% neutral, and

1.66% disagree; the mean was 4.42 with a standard deviation of 0.71 (Table 5). Neutral

responders were predominately male at 83.33%. Five of the 6 (83.33%) neutral

responders had 5–14 years of teaching at their community college, and 1 of the 6

(16.66%) had 30 plus years at their community college. There were no skipped responses

from the total 120 survey respondents. Overall, data indicated that the majority of

respondents agreed that professional development improves teaching effectiveness which

corresponds with research literature in the field of education (Brookfield, 2013; Cranton

& Hoggan, 2012; Mezirow, 2012).

Table 5

Perceptions of Informal and Formal Professional Development (Survey Question 2)

Perceptions	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree	*M*	*SD*
Improves my teaching effectiveness	1 .83%	1 .83%	6 5.00%	51 42.50%	61 50.83%	4.42	0.71
Encourages my continuous learning	1 .84%	2 1.68%	6 5.04%	39 32.77%	71 59.66%	4.49	0.75
Helps me to expand my professional networks	0 0%	4 3.33%	18 15.00%	57 47.50%	41 34.17%	4.13	0.78
Prepares me for a new career	3 2.50%	25 20.83%	54 45.00%	27 22.50%	11 9.17%	3.15	0.94
Helps me increase my income	12 10.26%	45 38.46%	31 26.50%	22 18.80%	7 5.98%	2.72	1.07

Note. PD = professional development.
Perceptions are listed in descending rank order based on a combined total percentage of Agree and Strongly Agree responses.

2. Professional development encourages my continuous learning. Participants

responded about their perceptions regarding professional development encouraging

continuous learning. There was 1 (.83%) skipped response from the total 120 survey

respondents. Combined Likert scale results indicated that 92.43% agreed, 5.04% were

neutral, and 2.52% disagreed; the mean was 4.49 with a standard deviation of 0.75 (Table

5). Neutral responses came from the 5–14 years of teaching groups, and disagree came

from the 0–14 years of teaching groups. Respondents teaching 15 or more years at their

present college indicated 100% agreement that professional development encouraged

continuous learning. Consistency of responses between the two subquestions of

professional development improves teaching effectiveness ($SD = 0.71$) and encourages

continuous learning ($SD = 0.75$) reinforced the reliability and validity of the survey

instrument (Creswell, 2014). Data results were consistent with educational literature

supporting the importance of continuous professional development of educators (Brooks

& Gibson, 2012; Hargreaves & Fullan, 2012).

3. Professional development helps me to expand my professional networks.

Participants responded about their perceptions regarding professional development and

expanding professional networks. There were no skipped responses from the total 120

survey respondents. Combined scale results showed that 81.67% agreed, 15% neutral,

3.33% disagree; the mean was 4.13 with the standard deviation of 0.78 (Table 5). Neutral

responses were reported equally from all years of teaching categories with 61.11% from

men. The combination of neutral responses and disagree responses (18.33%) for this

statement indicated a potential area of improvement as related to the importance of

professional networking and teaching effectiveness as cited in the literature (McKeachie

& Svinicki, 2014; Murray, 2014). Qualitative responses from Question 5 about long-term

planning and supportive resources identified 11.43% for more networking between

internal and external faculty members.

4. Professional development prepares me for a new career outside of

postsecondary education. Participants responded about their perceptions regarding

professional development preparing them for a new career outside of postsecondary

education. There were no skipped responses from the total 120 survey respondents.

Combined scale results showed that 31.67% agreed, 45% were neutral, and 23.33%

disagreed; the mean was 3.15 with the standard deviation of 0.94 (Table 5). Of the neutral

responses, 59.26% came from respondents over the age of 50 years which may have

related to their future retirement considerations.

5. Professional development helps me to increase my income. Participants

responded about their perceptions about professional development and its potential to

increase income. There were 3 (2.5%) skipped responses from the total 120 survey

respondents. Skipped responses for this question may have related to financial

sensitivities of respondents. Combined scale results, in descending order, showed that

48.72% disagreed, 26.50% held a neutral attitude, and 24.78% agreed that professional

development helped to increase income; the mean was 2.72 with a standard deviation of

1.07 (Table 5). Respondents with 20+ teaching years at their college indicated a 9%

higher agree response to this statement as compared to those respondents with fewer

years of teaching. The relationship between increased income and professional

development appeared to be influenced by years of teaching experience. Alger (2014)

posited that individuals enter the teaching profession for a variety of reasons beyond

salary, and attitudes about salary potential in education are often downplayed as

compared to employment in other professions.

Survey Question 3

Question 3 asked respondents to rank the importance of five professional

development options based on their present needs and interests. Although Johnson and

Christensen (2017) stated that rank order items are problematic to analyze statistically, the question style was included for variety as recommended by Creswell (2014). Preset options were based on typical responses for broad issues in the research literature: pedagogy, current and new expertise areas, digital technologies, and applied or academic research skills. Skipped questions ranged between 4.17% and 22.5% from the total 120 survey respondents. Higher numbers of skipped questions, as compared to the complete survey, may have reflected that ranking five options in order of importance was difficult (Johnson & Christensen, 2017) or that respondents utilized the option to skip survey questions based on their own preferences. Data analysis revealed two professional development options of low importance: learning a new subject area and learning academic or applied research skills. Cross tabulation of data between age groupings and combined low importance responses indicated that on average 61.30% of those respondents were 50 years of age or older. In comparison, of the 120 survey respondents, 65.06% were over the age of 50 years. Responses for low importance of learning a new subject area and learning academic or applied research skills were 54.17% as compared to the 27.29% average of low importance of current discipline, teaching and learning methods, and digital web tools. Chi-square testing for contingency tables showed no relationships that were statistically significant for all five sub-questions. Survey sub-questions are listed in descending rank order based on a combined total percentage of Important and High Importance responses.

Table 6

Importance Ranking of Professional Development Options (Survey Question 3)

Options	1 (low)	2	3	4	5 (high)	*M*
Current subject area or trade	12 11.43%	8 7.62%	21 20%	18 17.14%	46 43.81%	3.74
Teaching & learning theories and methods	6 6.32%	22 23.16%	24 25.26%	25 26.32%	18 18.95%	3.28
Digital technologies & web tools	13 13.98%	18 19.35%	25 26.88%	17 18.28%	20 21.51%	3.14
New subject area or trade	24 23.30%	24 23.30%	21 20.39%	18 17.48%	16 15.53%	2.79
Applied or academic research skills	45 39.13%	26 22.61%	15 13.04%	21 18.26%	8 6.96%	2.31

Note. Perceptions are listed in descending rank order based on combined total percentage of 4 (important) and 5 (high importance) responses.

1. Current subject area or trade. Participants ranked the importance of professional development in their current subject area or trade based on their present needs and interests. Combined Likert scales showed 60.95% high, 20% medium, and 19.05% low importance: the mean was 3.74 with the standard deviation of 1.39 (Table 6). There were 15 (12.5%) skipped questions from the total 120 survey respondents. Results indicated that respondents perceived professional development in their subject or trade as 15.68% more important than the second-place ranked option of teaching and learning theories. This finding supported trends in the research literature that educators in higher education most often view their greatest professional development responsibility to their discipline area (Cranton, 2006; Kreber, 2013). Sixty-five percent of those who ranked low importance were 50 or more years of age.

2. Teaching and learning theories and methods. Participants ranked the importance of professional development in teaching and learning theories and methods based on their present needs and interests. Combined Likert scales showed 45.27% high, 25.26% medium, and 29.50% low importance; the mean was 3.28 with the standard deviation of 1.20 (Table 6). There were 25 (20.83%) skipped questions from the total 120 survey respondents. Results indicated that respondents perceived professional development in teaching and learning theories and methods only 5.48% more important than the third-place ranked option of digital technologies and web tools. Similar to the previous option, 57.14% of those who ranked low importance were 50 or more years of age.

3. Digital technologies and web tools. Participants ranked the importance of professional development in digital technologies and web tools based on their present needs and interests. Combined Likert scales showed 39.79% high, 26.88% medium, and 33.33% low importance; the mean was 3.14 with the standard deviation of 1.34 (Table 6). There were 27 (22.5%) skipped questions from the total 120 survey respondents. Results indicated that respondents perceived professional development in digital technologies and web tools as only 6.78% more important than the fourth-place ranked option of new subject area or trade. Similar to the previous options, 61.29% of those who ranked low importance were 50 or more years of age.

4. New subject area or trade. Participants ranked the importance of professional development in a new subject area or trade based on their present needs and interests. Combined Likert scales showed 33.01% high, 20.39% medium, and 46.60% low

importance; the mean was 2.79 with the standard deviation of 1.39 (Table 6). There were 17 (14.17%) skipped questions from the total 120 survey respondents. Results indicated that respondents perceived professional development in new subject area or trade as only 7.79% more important than the fifth-place ranked option of applied academic research skills. Similarly, 62.50% of those who ranked low importance were 50 or more years of age.

5. Applied or academic research skills. Participants ranked the importance of professional development in applied or academic research skills based on their present needs and interests. Combined Likert scales showed 25.22% high, 13.04% medium, and 61.73% low importance; the mean was 2.31 with the standard deviation of 1.34 (Table 6). There were 5 (4.17%) skipped questions from the total 120 survey respondents. Results indicated that respondents perceived professional development of applied or academic research skills as the least important of the five options. Close in average to the other 4 results, 60.56% of those who ranked low importance were 50 or more years of age.

Survey Question 4

In Question 4, respondents were asked to identify the frequency of their engagement with preset professional development activities. Options were based on broad issues from the research literature: independent study, collaboration, attending workshops and conferences, online learning, face-to face interaction, and influence of students, family, and friends. Overall, skipped questions were low, ranging between 0.83% and 2.5% based on a total 120 survey respondents. Activities were listed in rank order based on percentage of high to low responses for the rarely category (Table 7). The

rarely category was evidence of limited or no engagement in professional development. Diversity in college environments, teaching responsibilities, and personal preferences would naturally have affected respondents' daily, weekly, or monthly engagement in professional development opportunities, but rare or no engagement responses should demand attention and further investigation.

Chi-square test for contingency tables using Question 4 showed no relationships that were statistically significant for gender, age, and years of teaching at the college. In the majority of cases, there were too many cells with less than a frequency of 5 which violates the assumptions of chi-square testing (Johnson & Christensen, 2017). A larger sample size would be required to offset this issue. Sometimes, in small samples sizes, Fisher's exact test is used in 2 x 2 contingency tables (Howell, 2007). Therefore, the Likert scale was regrouped between participate, which is the combination of daily, weekly, monthly, and 3–4 times per year, and rarely participate. Results did show statistical significance as related to gender on three of the eight subquestions: participated in workshops and events at my college, received ideas and resources from colleagues at my college, and utilization of online technologies and resources for learning and teaching. Fisher's exact test does not indicate cause and effect; it only conveys the probability of occurrence of association by chance (Johnson & Christensen, 2017). The eight subquestions are listed in descending rank order based on percentage of Rarely responses.

1. I participated in face-to-face workshops and events involving Colleges Ontario. The question was to identify the engagement of respondents in provincial face-

to-face professional development opportunities that are usually very comprehensive and of a high quality. These larger events offer information about the whole community college system involving 24 institutions. Responses indicated that 77.78% rarely participated, followed by 17.09% participated 3–4 times yearly. There were 3 (2.5%) skipped questions from the total 120 survey respondents. Despite academic literature that acknowledged the benefits of participating in professional conferences that offer a wide range of opportunities, high costs for long-distance travel, accommodation, and conference fees would limit respondents' engagement in many provincial events. Special funding or sponsorship opportunities would be required to subsidize expenses.

2. I participated in online workshops and events involving Colleges Ontario colleagues. This question was to examine participation in online workshops involving Colleges Ontario colleagues. Results indicated that 76.47% of respondents rarely participated, while 17.65% participated 3–4 times yearly. There was 1 (.83%) skipped question from the total 120 survey respondents. In the rarely engage category, there was a small difference of 1.31% between the subquestions of online participation and face-to-face participation in Colleges Ontario workshops. These data may have suggested an equal lack of engagement between the two options because of funding and scheduling issues as revealed in the qualitative data.

3. I gained ideas and resources from socializing with friends and family. Academic literature recognizes the benefits of informal learning and varied socialization opportunities. Combined results of monthly and 3–4 times yearly engagement indicated 50.84%, followed by combined daily and weekly responses at 12.71%. Rarely engaged

was 36.44%. In total, 63.55% of respondents identified that they gained ideas and

resources from family and friends over an academic year. There were 2 (1.6%) skipped

questions from the total 120 survey respondents. Results have represented the complexity

and richness of adult learning where a variety of opportunities, whether formal or

informal, are part of the learning equation.

4. I participated in workshops and events at my college. Engagement in local

workshops and events are usually on a volunteer basis with few or minimal associated

costs for faculty. Workshops and events may be scheduled in advance or as opportunities

present themselves, but scheduling conflicts are expected due to the nature of varied

teaching timetables. Results indicated that engagement was highest in the 3–4 times each

year category (53.78%), followed by rarely participate at 28.57%. Combined engagement

categories totaled 71.43% participation throughout the academic year. There was 1

(.83%) skipped question from the total 120 survey respondents. Fisher's exact (2-sided)

testing indicated a significant relationship between gender and this variable, p-value =

.03, $n = 119$, $p = .05$. Cramer's V association (.21) was moderate. Females had a 18.9%

higher rate of participation in local workshops and events than men. Therefore, the null

hypothesis was rejected and the alternative hypothesis was accepted. There was a

relationship between gender and respondents' participation in workshops and events at

the local college. The relationship was statistically significant, and the relationship

appeared to be practically significant.

5. I received ideas and resources from colleagues at my college. Research

literature acknowledged the critical importance of informal and formal peer mentoring

and sharing of resources between professionals. Results indicated that combined daily

and weekly sharing totaled 31.36%, followed by 3–4 times yearly at 27.97%, and rarely

at 20.34%. Combined total of all engagement categories over an academic year was

79.66%. There were 2 (1.6%) skipped questions from the total 120 survey respondents.

There was only 8.23% difference in responses between rarely received ideas and

resources from local colleagues (20.34%) and the subquestion rarely engaged in local

workshops and events (28.57%). Close results of these two items have indicated

consistency in perceptions about local professional development opportunities. Fisher's

exact (2-sided) testing indicated a significant relationship between gender and this

variable, p-value = .02, n = 118, p = .05. Cramer's V association (.22) was moderate.

Females received 17.92% more ideas and resources from local colleagues than males.

Therefore, the null hypothesis was rejected and the alternative hypothesis was accepted.

There was a relationship between gender and respondents' receiving ideas and resources

from local colleagues. The relationship was statistically significant, and the relationship

appeared to be practically significant.

6. I gave ideas and resources to colleagues at my college. Comparisons between

receiving and giving ideas to local colleagues revealed higher overall percentages for

giving ideas, especially on daily and weekly basis (40.68%) as compared to receiving

ideas (31.36%). Overall, academic year engagement of giving ideas totaled 84.75%.

There were 2 (1.6%) skipped questions from the total 120 survey respondents. Results

indicated supportive interactions of sharing concepts and resources between college

professionals, including room for improvement as 15.29% indicated that they were rarely engaged in giving ideas to local colleagues.

7. I utilized online technologies and resources for learning and teaching.
Combined daily and weekly percentage for utilization of digital technologies for teaching and learning was 57.98%. Monthly and 3–4 times each year categories radically dropped off at 15.97% and 13.45%, respectively. There was 1 (.83%) skipped question from the total 120 survey respondents. Fisher's exact (2-sided) testing indicated a significant relationship between gender and this variable, p-value = .03, n = 119, p = .05. Cramer's V association (.21) was moderate. Females utilized online technologies and resources for learning and teaching 14.2% more than men. Therefore, the null hypothesis was rejected and the alternative hypothesis was accepted. There was a relationship between gender and respondents' utilization of online technologies and resources for learning and teaching. The relationship was statistically significant, and the relationship appeared to be practically significant.

8. I gained ideas and resources from interactions with students. Adult learning environments recognize the partnership role in teaching and learning activities. Overall, 88.14% of respondents indicated that they gained ideas and resources from students over the academic year. Gaining ideas and resources from students was 25.43% higher than learning from families and friends which may have indicated positive teacher-student relationships. There were 2 (1.6%) skipped questions from the total 120 survey respondents.

Table 7

Informal and Formal Professional Development Engagement (Survey Question 4)

Engagement	Daily	Weekly	Monthly	3–4 Yearly	Rarely
I participated in f-2-f workshops & events involving Colleges Ontario.	1 0.85%		5 4.27%	20 17.09%	91 77.78%
I participated in online workshops & events involving Colleges Ontario.	0 0%	2 1.68%	5 4.20%	21 17.65%	91 76.47%
I gained ideas & resources from socializing with family & friends.	4 3.39%	11 9.32%	26 22.03%	34 28.81%	43 36.44%
I participated in workshops & events at my college.	0 0%	2 1.68%	19 15.97%	64 53.78%	34 28.57%
I received ideas & resources from colleagues at my college.	5 4.24%	32 27.12%	24 20.34%	33 27.97%	24 20.34%
I gave ideas & resources to colleagues at my college.	11 9.32%	37 31.36%	24 20.34%	28 23.73%	18 15.29%
I utilized online technologies & resources for learning & teaching.	31 26.05%	38 31.93%	19 15.97%	16 13.45%	15 12.61%
I gained ideas & resources from interactions with students.	12 10.17%	33 27.97%	35 29.66%	24 20.34%	14 11.86%

Noted. PD = professional development; f-2-f = face-to-face.
Activities are listed in descending rank order based on percentage of Rarely responses.

Survey Question 6

In Question 6, respondents were asked to indicate the degree to which they supported seven closed-ended Likert scale statements about their professional development perceptions. This question was placed just before the concluding demographic questions because it had a summary element in that it asked about respondents' overall satisfaction regarding their level of engagement in professional development. Perceptions were listed in rank order, high to low, based on a combined total percentage of responses to Agree and Strongly Agree (Table 8). There was only 1 (.83%) skipped response from the total 120 survey respondents which may have indicated respondents' interest with this set of subquestions.

Three dominant themes emerged from the data analysis: shared responsibility for professional development, collaborative learning and networking, and recognition of alternative learning opportunities. Supportive, controversial, or overlapping data from earlier survey questions were added to the analysis of Question 6 to enhance triangulation and increase credibility of the findings (Johnson & Christensen, 2017). Chi-square test for contingency tables for three subquestions showed relationships that were statistically significant as related to gender and years of college teaching. Accordingly, descriptive and inferential statistics were described under each of the seven subquestions. Survey sub-questions are listed in descending rank order based on a combined total percentage of Agree and Strongly Agree responses.

Table 8

Perceptions of Professional Development (Survey Question 6)

Perceptions	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree	*M*	*SD*
PD is a joint responsibility.	1 0.83%	2 1.67%	5 4.17%	56 46.67%	56 46.67%	4.37	0.72
F-2-f conversations are critical.	0 0%	2 1.68%	10 8.40%	62 52.10%	45 37.82%	4.26	0.68
PD is a personal responsibility.	2 1.67%	9 7.50%	15 12.50%	60 50%	34 28.33%	3.95	0.93
Noncredit courses are important.	2 1.67%	3 2.50%	22 18.33%	54 45%	39 32.50%	4.04	0.87
Cross-discipline collaborative learning has benefits.	2 1.67%	1 0.83%	26 21.67%	61 50.83%	30 25%	3.97	0.81
Online resources & networks are critical.	4 3.3%	7 5.83%	24 20%	51 42.50%	34 28.33%	3.87	1.00
Overall, I am satisfied with my level of PD engagement.	8 6.67%	29 24.17%	24 20%	43 35.83%	16 13.33%	3.25	1.16

Noted. PD = professional development; f-2-f = face-to-face.
Perceptions are listed in descending rank order based on a combined total percentage of Agree and Strongly Agree responses.

1. I believe my professional development is a joint responsibility with my college. Combined results of respondents' perceptions regarding the joint responsibility of professional development with their college indicated that 93.34% agreed, 4.7% were neutral, and 2.5% disagreed; the mean was 4.37 with a standard deviation of 0.72. (Table 8). There were no skipped responses from the total of 120 survey respondents. Supportive qualitative data from Question 5 indicated that 8% of respondents requested more administrative guidelines from their colleges, and 26.28% required more funding to access resources and opportunities (Table 4).

2. Face-to-face conversations with colleagues are a critical component of my professional development. Combined results of respondents' perceptions regarding the critical nature of face-to-face conversations indicated that 89.92% agreed, 8.40% were neutral, and 1.68% disagreed; the mean was 4.26 with a standard deviation of 0.68 (Table 8). There was 1 (.83%) skipped question from the total of 120 survey respondents. Additionally, Question 2 indicated that 59.75% of respondents either gave or received ideas and resources from local colleagues daily, weekly, or monthly (Table 5). Conversely, Question 4 indicated that 28.57% rarely engaged in local workshops and events at their college. Supportive qualitative data from Question 5 indicated that 11.43% of respondents required more internal and external communication with colleagues, and 8.57% required more teaching and learning resources.

3. I believe my professional development is a personal responsibility. Combined results of respondents' perceptions regarding their personal responsibility of professional development indicated that 78.33% agreed, 12.50% were neutral, and 9.17%

disagreed; the mean was 3.95 with a standard deviation of 0.93. (Table 8). Supportive

qualitative data from Question 5 indicated that 26.85% of respondents would benefit

from individualized professional development plans (Table 4). There were no skipped

responses from the total 120 survey respondents.

     4. Noncredit courses are just as important as credit courses for my

professional development. Combined results of respondents' perceptions about

noncredit courses indicated that 77.50% agreed, 18.33% were neutral, and 4.17%

disagreed; the mean was 4.04 with a standard deviation of 0.87 (Table 8). Despite the

positive value placed on noncredit courses and training, Question 4 responses indicated

that 60.94% rarely engaged in internal and external community college workshops and

events, whether online or face-to-face. There were no skipped responses from the total

120 survey respondents.

     5. I benefit from collaborative learning with colleagues from other

disciplines. Combined results of respondents' perceptions regarding collaborative

learning with colleagues from other disciplines indicated that 75.83% agreed, 21.67%

were neutral, and 2.5% disagreed; the mean was 3.97 with a standard deviation of 0.81

(Table 8). Supportive qualitative data from Question 5 indicated that 8.57% of

respondents requested increased local learning and teaching resources, and 11.43%

required more internal and external networking (Table 4). There were no skipped

responses from the total 120 survey respondents. Chi-square testing indicated a

statistically significant relationship between gender and this variable, x^2 (2, $N = 120$) =

14.68, $p = .05$. Cramer's V (0.35) indicated a strong association. Females agreed 29.2%

more than males that they benefited from collaborative learning with colleagues from other disciplines. Therefore, the null hypothesis was rejected and the alternative hypothesis was accepted. There was a relationship between gender and respondents benefiting from collaborative learning with colleagues from other disciplines. The relationship was statistically significant, and the relationship appeared to be practically significant.

  6. Online resources and networks are a critical component of my professional development. Combined results from respondents' perceptions regarding the critical nature of online resources and networks indicated that 70.83% agreed, 20% were neutral, and 9.13% disagreed; the mean was 3.87 with a standard deviation of 1.00. (Table 8). There were no skipped responses from the total 120 survey respondents. Results about perceptions and use of technologies were similar in previous questions. In Question 3, respondents ranked the importance of digital technologies and web tools as 66.67% with combined scales for high and medium (Table 6). In Question 4, 73.95% of respondents identified that they utilized online technologies on a daily, weekly, or monthly basis (Table 7). Qualitative data from Question 5 indicated that 18.85% of respondents required more software and hardware training (Table 4). Chi-square testing indicated a statistically significant relationship between gender and this variable, x^2 (2, $N = 120$) = 10.40, $p = .05$. Cramer's V (0.29) indicated a moderate association. Results for females were 26.7% higher than data for males that online resources and networks are a critical component for professional development. Therefore, the null hypothesis was rejected and the alternative hypothesis was accepted. There was a relationship between gender and

that online resources and networks were critical components of respondents' professional development. The relationship was statistically significant, and the relationship appeared to be practically significant.

7. Overall, I am satisfied with my level of engagement regarding professional development. Combined results of respondents' overall satisfaction with their level of engagement in professional development indicated that 49.16% agreed, 20% were neutral, and 30.84% disagreed; the mean was 3.25 with a standard deviation of 1.16 (Table 8). There were no skipped responses from the total 120 survey respondents. Cross-tabulation with age groups and this subquestion indicated that there was less than 8.46% difference in scores of those between age groups of 40–49 and 50–59 years which combined made up 71.67% of survey respondents. Gender results indicated that women were only 2.5% more satisfied with professional development engagement than men. Cross-tabulation indicated a trend between increased years of teaching and dissatisfaction with professional development engagement, particularly after 15 years (Table 9). The 15–19 years of teaching group, representing 20% of survey respondents, indicated less than 5% difference between disagree (41.7%) and agree (45.9%). Question 5 qualitative data indicated that the three most significant requests from respondents to improve professional development were individualized assistance with professional development planning (26.85%), funding for learning opportunities and resources (26.28%), and more technology training (18.86%) (Table 4).

Chi-square testing indicated a significant relationship between respondents' years of teaching at their present college and satisfaction with professional development

engagement, x^2 (4, N = 120) = 9.53, p = .05. Cramer's V (.20) indicated a moderate

association. Those with 0–9 years of teaching at their present college agreed 39.4% that

they were satisfied with their level of professional development engagement; those with

10–19 years agreed 56.5%, and those with 20 plus years agreed 44.4%. Therefore, the

null hypothesis was rejected and the alternative hypothesis was accepted. There was a

relationship between years of teaching and respondents' overall satisfaction with

professional development engagement. The relationship was statistically significant, and

the relationship appeared to be practically significant.

Table 9

Years of Teaching and Satisfaction with Professional Development (Survey Questions 7 & 6)

Years	Disagree	Neutral	Agree	Total
0–4	3	3	5	11
	27.30%	27.30%	45.50%	9.20%
5–9	5	9	8	22
	22.70%	40.90%	36.40%	18.30%
10–14	8	6	24	38
	21.10%	15.80%	63.10%	31.70%
15–19	10	3	11	24
	41.70%	12.50%	45.90%	20%
20–24	3	1	5	9
	33.30%	11.10%	55.60%	7.50%
25–29	3	2	3	8
	37.50%	25%	37.50%	6.70%
30 +	5	0	3	8
	62.50%	0%	37.50%	6.70%
N				120
				100%

Summary

The guiding research question asked, What is the relationship between full-time professors' level of engagement in professional development and their perceptions of resources and processes that improve teaching and learning? Mezirow's (2012) transformational theory, a dynamic and interdependent framework for the examination of adult development and learning, was used to explore professional development perceptions and engagement of 120 full-time faculty of five community colleges located in a remote midnorth region of east central Canada. Although almost half of the survey respondents indicated that they were satisfied with their level of engagement regarding professional development, the other half disagreed or were neutral. It was an on-going challenge and responsibility for northern college communities to critically examine professors' perceptions, processes, resources, and support engagement around professional development with the goal of improving teaching and learning. Although findings cannot be generalized to a population in self-selection sampling, survey data from respondents supported the following information about perceptions regarding resources and processes as related to professional development engagement:

- Professional development was a joint responsibility between a community college and a professor. Administrative support, clear guidelines, and equitable funding affected professional development engagement.

- Professional development in current teaching subject areas or trades was of primary importance, followed by teaching methodologies and digital technologies.

- Self-directed and collaborative professional development, whether informal or formal, improved teaching effectiveness. Collaborative learning, across disciplines and community colleges, encouraged engagement in professional development.

- Professional networks, both online and face-to-face, were required to access resources, explore innovations, and encourage continuous learning. Traditional face-to-face conversations remained as critical components of engagement in professional development.

- Noncredit or informal learning opportunities were equally important as compared to accredited or formal professional development. Noncredit learning should be acknowledged.

- Customized professional development plans for individuals encouraged continuous learning, particularly as college teaching expertise was gained over time.

- Systematic communication, within and between colleges, and administrations' rescheduling of teaching duties for unique opportunities supported engagement in professional development.

- Gender and years of teaching at the community college were variables to consider when planning professional development opportunities.

Findings of this study indicated respondents' strong support for the critical components of professional development such as collaboration, sharing of resources, attending workshops and conferences, utilizing web tools to enhance teaching and

learning, and personal networking. There was less support for learning a new discipline, developing academic or applied research skills, increasing salary, or preparing for a career outside of postsecondary education. Actual engagement in professional development was hampered for some survey respondents by limitations with funding, time and schedule constraints, unclear professional development guidelines, insufficient administrative support, and a lack of short- and long-term planning for individuals with very specific interests and needs.

Perceived beliefs about resources and process that affected engagement in professional development related to Mezirow's (2012) theory of adult transformative learning. The theory described emancipation when individuals learned to critically reflect using rational discourse and consensus to test the validity of ever-changing ways. Through perspective transformation, adult learners may shift their assumptions beyond the social realities defined by others and become more judicious in decision-making (Mezirow, 2012). Survey respondents indicated their awareness of the challenging socioeconomic realities of offering or receiving quality education in a competitive market. Professional educators and their organizations would benefit from supportive and collaborative learning communities that strategically plan, create, or utilize innovative approaches while respecting individual needs (Murray, 2014). Safe and trustworthy learning environments for professors in midnorthern community colleges may be improved by building on face-to-face traditions, customizing learning for individuals, and capitalizing on informal and formal opportunities of expanding digital technologies.

Based on the study's results and my committee's permission, the project deliverable was a 3-day workshop for community college professors around customizing professional development planning with supports. Topics included theories and research in higher education, collaboration, personal networks, professional development policies, individualized learning plan, and work and life balance. Each unit was designed for community college faculty members, but feedback and participation to strengthen the credibility includes administrators and other higher education or human resource professionals. Workshops were aimed toward creating an individual's short- and long-term plan utilizing research, theories, workshop participants' experiences, guest speakers, and daily reflective writing. Workshops were designed for both face-to-face and online delivery. Personal learning environments are usually linked with sociocultural, constructivist, and connectivist theories of learning (Laakkonen, 2015). The principles of connectivism are based on connecting information sources, both human and technological.

Conclusion

The mixed-methods research design, setting, sample, and results based on educational research principles and alignment with the guiding research question were described in Section 2. Context and concurrent strategies are included along with the data mixing, analysis, and validation procedures to ensure transparency and accuracy of findings. Measures for protection of participants were clarified with the invitation letter and the consent information. The project study will be introduced and described in Section 3.

Section 3: The Project

Introduction

The project I created was a 3-day professional development workshop that will help college professors in planning and supporting their professional development. In this section, I will outline the description and the goals of the project related to how they address the problem of professional development programming that meets both the specific learning needs of individual full-time professors and the specific operational needs of northern community colleges. A scholarly rationale for both the genre and content choices will be presented. This section will also include reviews of interconnected theories and recent literature that reflect a diverse perspective and saturation. Project resources, supports, barriers, responsibilities, and timetables will be described for implementation. I will also discuss formative and summative outcome evaluation tools and goals involving key stakeholders and outline the project implications for social change for local stakeholders and a broader context.

Description and Goals

Based on the findings and my interpretation of survey data, the project deliverable I created was a 3-day workshop curriculum titled, *Customizing Your Professional Development: Planning and Supporting* (see Appendix A). The workshop will initiate or advance community college professors' short and long-term customized professional development plans. Workshop modules have the potential for face-to-face or online hybrid delivery options with a focus on collaborative learning within a supportive environment. Based on research of professional development literature in higher

education, my experiences, and Community College Professors' Professional

Development Survey (CCPPDS) results, topics included the following:

- survey data, results, and findings from CCPPDS;

- roles of adult learning theories and research;

- benefits and challenges of collaborative learning;

- college vision and global partnerships;

- college professional development policies and guidelines;

- critical components of a professional development plan;

- benefits and challenges of informal and formal networking;

- roles of mentors and critical friends;

- importance of work and life balance; and

- components of self-evaluation.

I designed the workshop for community college faculty members, with selected

administrators or human resource professionals as guests to provide additional

information or resources. The selection of guests will be done by each college based on

the available individuals' expertise, experience, and interest in the professional

development of professors. Experienced facilitators in adult education and college

systems will take key roles in workshop delivery and evaluation. Facilitators may be local

professors or from other college environments. As recommended by Brookfield (1995)

and Laakkonen (2015), the overall design of the workshop was learner-centered with

participants' making significant choices and sharing relevant learning. Facilitators will

take the role of colearners, along with coordinating and adjusting activities as needed (see

Cranton, 2006, 2016). With repeated delivery and evaluations, the workshop will be fine-tuned according to instructional design processes (see Dean, 2004; Murray, 2014). The recommended workshop group size was 15 volunteer participants per expert facilitator. In the project, individuals' short- and long-term professional development plan and network resources will use research, theories, the individuals' past experiences and goals, guest speakers, professional peer support, technology, daily reflective writing, and evaluation.

This workshop project addressed the problem of faculty development programming that meets both the specific learning needs of individual full-time professors and the operational needs and future direction of each college. The requirements for improving professional development were based on two critical issues involving northern college faculty: internationalization and program collaboration between colleges (see Colleges Ontario, 2015; Ontario Ministry of Training, Colleges and Universities, 2015). The geographic isolation of northern colleges, decreasing government financial support, rapidly changing technologies, and a tradition of competition between colleges were some of the barriers that limit collaboration and sustainability. A workshop that actively engages professors to collaboratively plan their professional development around their subject discipline and teaching expertise will enhance the complex task of making critical decisions (Murray, 2014). Multiple resources and delivery options will offer participants' choices to fit their preferences and challenge their development. Collaboration offers cross-discipline insights from participating colleagues and opportunities to candidly discuss college goals and future directions with administrators of multiple levels in the organization.

Subsequently, the professional development plan and supportive network for each participant will be customized while acknowledging the future direction and vision of their college (see Elliot, 2014; Laakkonen, 2015; McCormack et al., 2016). Each professional development plan will represent continuous learning with short- and long-term goals that include flexible strategies based on uncertain circumstances or changing paradigms. Professors will have the choice of sharing their plan with mentors and administrators to communicate their need of specific types of support, including funding. As found in my initial literature search, the workshop will acknowledge and synthesize the concepts of changing college environments and lifelong learning. Based on my experiences and studies, I developed the workshop with the following goals:

- to analyse the role of short- and long-term professional development for individual's subject and pedagogical expertise based on collaboration, realistic resources, timelines, evaluations, networks, and holistic supports;

- to assess the role and effectiveness of formal, informal, face-to-face, and online professional development resources and networks based on context and authentic teaching and learning needs of individuals within their organization; and

- to develop and document customized, flexible, and manageable professional development plans for individuals with supportive networks based on realistic resources, timelines, and evaluations that reflect adult life-long learning principles.

Rationale

An authentic professional development plan and network resources, based on individual needs and professional collaboration, will help to address the critical and continuous task of improving teaching and learning in a continuously changing environment (see Murray, 2014; Webster-Wright, 2010). Learning environments for individuals are usually linked with sociocultural, constructivist, and connectivist theories of learning (Laakkonen, 2015). Learners are seen as codesigners to create a culture that promotes deep learning and personalization (Elliot, 2014; Laakkonen, 2015; McCormack et al., 2016). This workshop will holistically address the problem of how to plan and support college faculty members' short- and long-term professional development. Topics such as life and work balance and self-evaluation are included. Rapid changes in college systems demand professors to make academic and delivery adjustments to support college sustainability and to ensure quality education and success for students (Colleges Ontario, 2015). Collegial discussions that challenge thinking and practices, beyond managerial directions, will help to encourage learning where there may be mixed feelings, withdrawal, or resistance to adopting new ideas (McPherson, Budge, & Lemon, 2015). To foster the continuous professional development of individuals, collaborative discussions that connect information sources and alternatives will be held to enhance the construction of flexible and realistic plans.

I chose this project genre based on the scholarly contributions of Cranton (1996, 2006, 2012, 2016) who holds the perspective that the professional development of educators can be transformative as described in Mezirow's (1991) transformation theory

of adult learning. Mezirow stated that transforming familiar beliefs, attitudes, and habits, whether done quickly or slowly over time, may generate more truthful, justified, and inclusive thoughts to guide an individual's action. Ideally, the individual would then be more critically reflective, empowered, and emotionally capable of making change and taking appropriate action in particular situations. Mezirow acknowledged that not all forms of learning, such as adding knowledge to present meaning schemes, will bring about critical awareness and transformation in individuals. Cranton (1996, 2006, 2012) maintained that educators can foster personal autonomy, self-management, and work cooperatively and collaboratively with colleagues and organizations, but educators must not be restricted by constraints if they are to seek independent learning projects and autodidactic learning. Educators must have some control over decision-making when working in formal educational surroundings (Cranton, 1996, 2006, 2012, 2016). Ideally, the professional development of college educators should extend beyond the limitations of college policies and restricted budget lines.

Specific to higher education, Elliot (2014) acknowledged that differences between institutions and faculty members affect the success of professional development programs and cautioned that institutions similar in size and mandate may also have very different needs. Elliot recommended that each college must determine an effective plan while considering necessary conditions that include administrative support, structure, rewards, faculty ownership, quantitative and qualitative evaluations, and collegiality. The author's investigation highlighted the importance of faculty involvement and ownership in preparing and implementing professional development, utilizing critical thinking

strategies, capitalizing on web-based and traditional resources, providing experienced

facilitators to coach individuals and groups through change, collecting evidence to

measure effectiveness, and encouraging sustainability of learning (Elliot).

In developing this workshop, I followed Elliot's (2014) recommendations of

providing structure, conditions, expertise, and supportive resources. Having examined

professional development planning options, Scoppio and Covell (2016) also highlighted

the importance of an organization's clear communications and provisions of appropriate

pedagogical, technical resources, and supports for educators. For example, mixed

messages and inconsistent support between individuals and their organization can easily

undermine professional development planning. McCormack et al. (2016) identified four

specific meta-themes for professional development planning: collegiality, community

development, individual capacity building, and improvement of processes and practices.

Their work of analyzing narratives in higher education learning networks revealed

evidence of educators' stress, isolation, and fear of managing change in an uncertain

environment. Partnership and collaboration is required for the college system's

sustainability; those skills must be modelled and reinforced within individual colleges

(Colleges Ontario, 2014, 2015). My project workshop that follows adult learning

principles and McCormack et al.'s themes for professional development will offer an

applied and practical resource for college improvement.

This project aligned with the results of the data analysis from Section 2 in that the

workshop facilitated professional development planning for individuals that incorporated

several key aspects of the findings: supporting the development of short- and long-term

professional development plans; utilizing informal and formal resources; collaborating with other professionals; examining and integrating technological supports; and identifying organizations' visions, policies, and operational changes. My qualitative data analysis of CCPPDS indicated that participants perceived that their individual needs and their college contexts were unique. Participants suggested that a college-specific and customized professional development planning process would enhance their development. Similarly, Price and Kirkwood's (2014) findings indicated the critical role of institutional context and subject expertise influenced educators' perceptions about learning and teaching practices. My quantitative data analysis of CCPPDS indicated that only half of survey respondents were satisfied with their present professional development opportunities. Participants with 15–19 years of teaching experience were more discouraged than those participants with less experience. Workshop participation may motivate and improve professional development particularly for specific groups or individuals who are dissatisfied or discouraged.

The CCPPDS data indicated that participants valued the importance of professional development, and 93% believed that professional development was a joint responsibility with their college. The workshop content of the project is associated with the problem of preparing professors for changes in their colleges, along with promoting agency, collaboration, support systems, and relevant resources (see Niehaus & O'Meara, 2015). The workshop content also includes key issues as described in research literature and from survey participants: formal and informal learning, networks, technology, and work and life balance. Local pilot testing of the content within a college community will

further define specific needs and adjustments to the content will be considered based on participants' workshop evaluations, along with changing needs of the community, research, and innovations in education and technology. The workshop will be a platform for individuals to prepare a professional development plan that would be enhanced and amended as needed. A professional development plan could be voluntarily shared with those who may offer additional support, funding, and information. One goal of the project was to decrease an individual's sense of isolation, confusion, and wariness that result from repeated disappointments or failures as related to professional development opportunities.

Pataraia, Margaryan, Falconer, and Littlejohn's (2015) university study of academics stated that formal and informal personal and professional networks encouraged reflection, problem-solving, creativity, and promoted effective teaching. CCPPDS results indicated that informal resources for professional development were identified as important. McCormack et al. (2016) findings in higher education also demonstrated that faculty networking was effective and had short- and long-term personal and professional benefits, including financial savings. Costs of planning and managing online communities for educators' professional development most often offered financial savings for organizations over time (Matzat, 2013). The workshop has the potential to address improvement of professional development planning and practices in diverse and changing college environments.

Review of the Literature

CCPPDS results indicated that over 90% of participants agreed that professional development improved teaching effectiveness and encouraged continuous learning. Survey results also communicated that individualized or customized planning will benefit individuals' professional development. Professors' positive attitudes about the effectiveness of professional development was a platform for me to develop a workshop that focused on the critical step of individuals voluntarily preparing or revitalizing a professional development plan to meet their learning needs within the college system. Educators required an opportunity to examine various issues of professional development in an environment that was informative, collaborative, and supportive (Lawless, 2016; Tour, 2017). Strategies for continuous support and for handling change were critical as part of the planning process (Elliot, 2014; Scoppio & Covell, 2016). Trust et al. (2016, 2017) and Tour (2017) agreed that professional learning in the 21st century should focus on the overall flexibility of learning networks that respond to educators' disparate needs and transcend traditional barriers. CCPPDS data revealed that gender and years of teaching experience significantly affected the professional development needs of individuals; therefore, planning and resources must respect diversity and offer a plethora of options. For example, network participation could be minimal or comprehensive in influencing affective, social, cognitive, and other characteristics of professional growth. Trust et al. and Tour indicated that participants of learning networks perceived positive changes in attitudes and practices that were mirrored in both students and educators. Availability of resources, anytime and anywhere, fostered learning experiences for highly

specialized and competitive environments. Van Waes, DeMaeyer, Moolenaar, Van

Petegem, and Van den Bossche (2018) posited that teaching networks had the potential to

support professional development of educators, particularly concerning instructional

practices.

CCPPDS results also indicated that 81% of participants agreed that professional

development helped them to expand networks. Networks were usually linked with

sociocultural, constructivist, and connectivist theories of learning (Laakkonen, 2015).

Sociocultural theories recognized how the social world influenced development; society

defined individuals based on multiple factors which may include age, gender, ethnicity,

and socioeconomic status (Kimmons & Veletsianos, 2014; Knowles,1980; Merriam et al.,

2007). Constructivist theories maintained that learning was an active process of how

individuals build meaning through dialogue, collaboration, and cooperation (Dewey,

1916; Merriam et al., 2007). Principles of connectivism were based on connecting a

variety of information sources and an individual's decision-making in determining

content in a changing environment (Laakkonen, 2015; Lawless, 2016; Siemens, 2006).

Expanding and documenting of network links were critical components of the

workshop's content in that networks promoted sharing and dialogue between individuals.

Learning networks complemented professional learning communities and offered

educators the opportunity to access global resources and experts that were not always

available within an institution (Murray, 2014; Niehaus & O'Meara, 2015; Siemens, 2006;

Tour, 2017; Trust et al., 2016, 2017).

Professional learning networks were described as multifaceted learning systems that encouraged professional growth through interacting with others and sharing of diverse resources whether face-to-face or online (Tour, 2017; Trust et al., 2016, 2017). Macia and Garcia (2016) differentiated between online networks and communities because the terms occurred independently or combined; a network may involve spontaneous and serendipitous personal interactions, whereas a community was usually a shared identity and sustained experience. Macia and Garcia's review of virtual communities and networks acknowledged that participation in online environments was reinforced by face-to-face contact and relationships that built trust and reciprocity. Tour (2017) indicated that blended learning, both virtual and physical, enhanced relationship building and learning. It was recommended that the workshop be delivered in a face-to-face or a hybrid mode in recognition of sociocultural theories. Matzat (2013) reported that blended communities and participation of educators who already knew each other increased participation and had beneficial effects.

Sharing of knowledge and resources between educators enhanced professional development (McCormack et al., 2016; Pataraia et al., 2015; Van Waes et al., 2018). CCPPDS results revealed that 20% of participants rarely received ideas and resources from colleagues, and 15% rarely gave ideas and resources. Collegial communication can be enhanced with workshop opportunities and reduce isolation. Tseng and Kuo (2014) indicated that performance expectation and self-efficacy were critical for knowledge sharing and participation of Taiwanese educators' online communities of practice. Social relationships and networks increased educators' willingness to share resources and solve

instrumental and emotional problems. Prosocial attitudes were fostered in the online community and improved individual and organizational performance (Tseng & Kuo, 2014).

In contrast to support for network learning, Price, Coffey, and Nethery (2015) found that early career academics' participation in a network, both online and face-to-face, added more pressures to an already stressful higher education employment experience. Goodyear, Casey, and Kirk (2014) acknowledged that voluntary participation of educators using virtual networks was necessary as opposed to forcing or alienating non-users. Constructivist theories of learning were utilized in the workshop in that voluntary participants would be active and have many options and opportunities to reflect and build meaning into their learning. Trust et al. (2016) warned that it is important to avoid generalizing about benefits of networks and to recognize that few institutions track informal learning. CCPPDS data indicated that 70% of participants agreed that online resources and networks were critical to their learning, and 77% agreed that noncredit courses were just as important as credit courses for professional development.

Lawless (2016) stated that policymakers must be careful not to force pedagogies to fit technology. Kamalodeen and Jameson-Charles (2016) found that secondary school teachers in Trinidad and Tobago used networking sites, and they identified time, motivation, technology, and usability as barriers to participation. Similarly, CCPPDS results acknowledged that the lack of scheduled time, funding, communication, and technological supports were factors that hampered participation in professional development. Kimmons and Veletsianos (2014) cautioned that understanding educator

identity and online participation required more research. Tour (2017) and Trust et al. (2017) recommended further investigation regarding informal, unstructured, spontaneous, and self-initiating learning for professionals. A potential benefit of the workshop and its evaluation would be to gather more local and regional information about how college professors' beliefs and assumptions influenced their use of technology in their professional development.

Literature reviewed was retrieved using key words, Boolean, and electronic searches in Education Resource Information Center, EBSCOhost, Education Research Complete, and Canadian Business and Current Affairs Education. Google and Google Scholar were also used to verify key concepts. Search terms and phrases included *networking in education, networking in higher education, collaboration, technology in education, learning communities,* and *online professional development*.

Implementation

Project implementation will first involve communication with individual college's administration and its professional development office. Reviewing CCPPDS results and sharing the workshop curriculum will facilitate further discussions and perhaps adjustments as related to financial costs, conditions, structure, and supportive resources that include the organization's expertise. Individual colleges have knowledge of time frames that will be conducive to a 3-day volunteer commitment of professors within its semester structure. College communication systems will be used to distribute workshop curriculum information and requirements for participation. On-site classroom materials, resources, computers, and data projection equipment will need to be obtained or

scheduled. Each participant will require access to technology and Internet services within the central learning classroom. Based on my experiences and studies, a workshop for 15 participants will require the following resources:

- classroom that can accommodate a minimum of 15 participants;

- moveable tables and chairs;

- data projector, computer, and screen;

- 2 whiteboards with colored markers;

- 3–4 flip chart stands and paper;

- 15 colored markers;

- 15 laptops with Microsoft Office and Internet access;

- 15 notebooks and writing utensils;

- 15 folders to hold curriculum documents, schedule listing, and evaluation forms;

- additional break-out areas which may be a library, lounge, or classroom; and

- refreshment services.

Potential Resources and Existing Supports

Fortunately, instructional resources and supports are readily available at most northern community colleges. With administrators' permission, space and equipment can be scheduled for college professional development workshops without financial charges. Instructional equipment is usually monitored by service departments that handle bookings, usage, technical information, and repairs. Most college sites have access to computers, software, Internet, data projectors, flip charts, and classrooms of many sizes.

Additional classroom space for workshops is usually available during semester breaks.

Human resources and college support staff provide services for workshops when

requested by upper management. Executive teams at colleges usually include an

academic vice-president who overseas professional development of faculty. Small

satellite delivery locations communicate to main offices at larger colleges. It is a goal of

colleges to offer positive learning environments (Colleges Ontario, 2016).

Potential Barriers

A potential barrier would be scheduling the workshop at a time when professors

are not occupied with full-time teaching duties. The workshop's benefits would be

enhanced if participants did not have competing responsibilities between 8:30 am to 4:30

pm for 3 consecutive days. If necessary though, three days could be delivered over a 1 or

2-week period, including the option of delivering a hybrid adaptation with both online

and face-to-face delivery. Based on CCPPDS results, advanced notice of at least 6 weeks

would be recommended for participant workshop sign-up. Initial start-up cost of the

workshop may be a barrier if an outside facilitator is brought in, but that expense can be

minimized by the use of and continuous training of in-house personnel. Video

conferencing or recording may be considered for providing accessibility to more remote

locations.

Proposal for Implementation and Timetable

Based on my college experiences and studies, a recommended timetable is

described for each day of a face-to-face workshop. Adjustments may be made based on

contexts and specific needs of adult learners (Knowles, 1980; Murray, 2014). CCPPDS

data indicated that consistency in the planning of professional development events facilitated professors' expectations and allowed them to manage their commitments accordingly. The daily schedule included four activity sessions and time for critical reflection and evaluation.

8:30–9:00   Greetings and Information Giving

9:00–10:30   Session A

10:30–10:45   Mid-morning Break

10:45–12:00   Session B

12:00–1:00   Lunch Break

1:00–2:30   Session C

2:30– 2:45   Mid-afternoon Break

2:45–4:00   Session D

4:00–4:15   Reflection and Closing Remarks

4:15–4:30   Evaluation

With the delivery of workshops, unexpected situations arise; therefore, the facilitator must be prepared to handle issues to ensure smooth delivery and learning success (McKeachie & Svinicki, 2014). For implementation, I recommend that following tasks and processes:

1. share workshop curriculum, goals, benefits, and costs with college executive team;

2. gain administrative permission to deliver the workshop on campus – specific number of registrants, and participant selection criteria may be necessary;

3. gain administration's commitment to participate for two sessions on the second day of workshop, and outline requirements;

4. disseminate workshop information and professor invitation through college e-mail systems, preferably with 6 weeks' notice;

5. disseminate one reminder of workshop, if necessary, 1 week following first notice;

6. record interested participants' names and consider selection, numbers, additional workshops, and extra facilitators when needed;

7. request a brief outline of each participant's teaching experience and professional development interests through e-mail;

8. notifying college services that schedule rooms, equipment, and door security;

9. review scheduled classroom for equipment, lighting, and seating arrangements;

10. e-mail agenda and key resources to participants one week prior to start date, including an invitation to ask questions;

11. deliver paper resources, flip-charts, and markers to classroom;

12. review day's agenda and subsequent feedback each day to participants;

13. distribute and collect daily evaluation forms for facilitator and administrative analysis;

14. discuss adjustments to curriculum as necessary with participants;

15. write a final summary report of workshop strengths and areas of improvement for participants and administrators; and

16. plan a final day celebratory meal or event with participants and their guests.

Each college has unique processes for accessing services. It is critical that these processes and timelines be respected and followed to ensure successful delivery of the workshop. Resources and identification of departments are available in the online college directories that offer e-mail and telephone contact information. Clear and direct communication strategies, followed up with written confirmations and feedback, support potential problem-solving and implementation. Relevant communications should be shared with the college's administrative team for future planning and evaluation (Murray, 2014). Assessment, developing instructional materials, and reflection were key elements of instructional design (Dean, 2004).

Roles and Responsibilities of Student and Others

Based on the influence of colleagues and benefits of collaboration, it is recommended that an advisory committee voluntarily share the responsibilities of recommending workshop revisions, adjustments, and scheduling (Price & Kirkwood, 2014). The committee may be a subcommittee of an already existing college academic group. Ideally, advisory members will be experienced educators or will have taken the workshop. They should demonstrate interest in promoting and revising the workshop according to feedback and needs. Roles and responsibilities of workshop members would be to participate in discussions, cooperate in the activities, provide feedback, and self-assess their learning. Guests from administration would be responsible for providing information about the college's vision and professional development policies and

guidelines, including collective bargaining agreements. Administrators must be prepared to answer professors' questions or have access to information.

Project Evaluation

Evaluation required a balance of content, characteristics of learners, and the realities of contexts (Dean, 2004; Elliot, 2014). Brookfield's (1995) five-question critical incident questionnaire concept was adapted and incorporated as part the workshop's daily evaluation process. Brookfield recommended this method as it required thoughtful analysis and specific details about participants' learning. For the college workshop, questions were adjusted to fit the adult professional learner, and choices were offered. The schedule included time for daily reflection and evaluation of each session based on a Likert-type scale and an open comment section. Evaluations will be examined and used to improve workshop design and delivery. Outcome-based daily evaluation supports necessary adjustments during and after workshop sessions; therefore, evaluation was both formative and summative. Formative data will be reported to participants, as partners in learning, in a timely manner. Summative data will be shared in a written report with college administrators and participants to measure outcomes and relate to the overall judgement of the workshop. Both quantitative and qualitative methods were used to capture both numbers and words to support a comprehensive mixed-methods assessment (Creswell, 2014). Throughout the workshop, informal observations and comments from participants will be noted by the facilitator and used to address and resolve problems through discussions. Confidentiality will be ensured by requesting participants to submit evaluation forms without identifying names.

Implications Including Social Change

Local Community

The positive social change implications included knowledge and resources useful for educators and administrators who are searching for direction in improving teaching and learning practices at northern community colleges. The research may foster new policies or studies that address the complexity of planning professional development that accommodates a diversity of personal and professional needs. Planning professional development for individual professors is very complex due to the number of factors that must be analyzed and synthesized in the decision-making process. Personal, professional, employers,' and students' needs were considered, along with timing, costs, and availability of resources. Short-term, long-term, face-to-face, and online options were also considered, including authentic support systems to sustain motivation and improve evaluation. Pataraia et al. (2015) reported that informal conversations between peers promoted reflection, problem-solving, and learning.

Ultimately, the task and approach of professional development should not be based on random hit-and-miss or one-size-fits-all (Murray, 2014; Teras, 2016). The project addressed the needs of individual northern colleges and professors in that it presented a focused workshop to plan professors' professional development. The workshop recognized the needs of individuals but also aligned with the college's vision and resources. Price and Kirkwood (2014) stated that institutional policymakers play an important role in influencing culture and affect practitioners' actions. McPherson et al. (2015) identified how social ties influenced how educators dealt with professional

development and organizational change. Professors' decision-making and planning will benefit from collaborative interactions and sharing of resources to improve practices. Improved practices enhance opportunities for institutions and learners in local communities.

Far-Reaching

The positive social change implications included knowledge and resources useful for educators and administrators who are searching for direction in improving teaching and learning practices at community colleges which face challenges of small size, geographic isolation, and budget restrictions (Colleges Ontario, 2015; Elliot, 2014; PricewaterhouseCoopers LLP, 2017). The research may foster the creation of new policies or studies that address the issues of regional and national community colleges formally acknowledging specific components of informal professional development. Long-term results would include improvement in human and social conditions in that socioeconomic success of individuals would be enhanced through participation in quality postsecondary education and training.

The importance of relevant and effective professional development of educators in higher education cannot be overstated or overemphasized (Cranton, 2006, 2016). Elliot (2014) affirmed that continued budget reductions in higher education required more creative work to reduce costs while maintaining quality services. McPherson et al. (2015) reiterated the importance of using social networks for professional development of academics as training budgets decrease. Planning processes and resources that support learning formally and informally in specific educational environments need development

and acknowledgement from the larger community. Tour (2017) noted that informal learning should be recognized as valuable and combined with formal learning. Tour stated that what is not always realized by critics is the time and skill demands of learning new software and changing technologies that enhance curriculum. Individual and organizational responsibility to maintain expertise in subject disciplines and teaching strategies are integral to professionalism and standards; therefore, systems that support the varied skill sets of postsecondary educators have value to ensure quality education and services (see Tour, 2017). Tadesse and Gilles (2015) concluded that focusing educators' awareness on pedagogical principles significantly improved teaching and learning. Fortunately, global networking and sharing of resources, even in isolated locations, is facilitated by Internet technology which is accessible and financially manageable in most institutions. Pataraia et al. (2015) credited networks with increasing learning opportunities and stimulating creativity from collaborating with different people. Personal learning networks are complex and multifaceted learning systems of people, tools, and resources (Tour, 2017; Trust et al., 2016; Van Waes et al., 2018). More emphasis on identifying quality electronic resources and tools for professional development would support customized and relevant learning. A comprehensive professional development planning process was a logical starting point.

Conclusion

The professional development workshop was described as related to goals, rationale, review of the literature, implementation, and evaluation. The workshop design and implementation plans were based on sociocultural, constructivist, and connectivist

theories that were related to individuals and their learning environment (Laakkonen, 2015). Current research about professional development in higher education further supported the key elements of the workshop and saturation was achieved. Mixed-methods design was used for evaluation to help describe depth and breadth of results. Local and far reaching social change involved improving professional development practices for individuals and organizations, which in turn, supports student success in their studies and life goals. The final reflection and conclusion about the doctoral study will be described in Section 4. Processes, scholarship, project development, practices, and potential impact for social change are presented.

Section 4: Reflections and Conclusions

Introduction

In the final section of this study, I will define and consolidate the outcomes and processes of the project from my insights as a scholar, project developer, leader, and practitioner. The section will include my evaluation and self-analysis of these multiple roles and responsibilities. The potential impact of the project on social change will be discussed based on personal and professional perspectives and experiences. I will also provide directions for application of this project and future research aimed to continue the challenge of understanding the professional development of educators, informing policy-making, and improving practice.

Project Strengths

Addressing the problem of faculty development programming, the overarching strengths of the project in were: using the mixed-methods design to capture both quantitative and qualitative data, surveying individual practitioners to gain their comments, ensuring the confidentiality of participant responses, and motivating authentic responses through a credible researcher-participant relationship. Participants, without employer or union pressure, voluntarily identified perspectives and were invited to write open-ended comments about professional development resources they believed would improve their teaching and learning effectiveness. In an educational institution, opportunities to identify individual perceived needs for professional development, without serious or negative consequences, provide valuable information to show trends in choices and behaviors (Hargreaves & Fullan, 2012; Webster-Wright, 2010). Providing

the occasion for participants to state their opinions and make suggestions offered

possibilities of improvement for individuals, colleges, or whole systems. Participants

were able to ask me questions and receive private responses. They were invited to

identify their beliefs and values without the influence of social dynamics within group

discussions. Participants were also aware that I, although now retired from full-time

college teaching, had experienced a similar work environment.

Another strength of the project was the creation of a professional development

workshop to specifically support college faculty and their work. The design of the

workshop included follow-up action and flexible options, techniques, and tools, based on

the results of the survey data. A balance between collaboration and individualized

learning enriches the experience with the sharing of ideas, resources, and processes

(Tadesse & Gillies, 2016). The inclusion of college administrators in two of the 12

workshop sessions was also a strength of the project. Inclusion respects the diverse

working relationship and shared goals between different professional groups within the

system (Hargreaves & Fullan, 2012; Webster-Wright, 2010). The curriculum of the

project invited, stimulated, and generated ideas to advance individuals' professional

learning; therefore, the workshop may stimulate positive individual or system change.

Recommendations for Remediation of Limitations

Although I reviewed national and international higher education literature on

professional development to saturation, specific data on the community colleges of

northern regions were extremely limited (see Fisher, 2009; Howard & Taber, 2010;

Townsend et al., 2009). No published survey tool was found that would have been

appropriate for this study; therefore, a new tool was created. Pilot testing the survey tool was more complicated than I expected. I would recommend gather input from greater numbers of participants and a more diverse group of college professors for future survey tool development. A goal of research is reliability and validity of instruments (Creswell, 2014). Focus group discussions and interviews would have demanded more time and financing, particularly for travel, but those activities may have increased survey participation beyond 20%. For example, a mixed-methods, exploratory, sequential design would have involved a first phase of qualitative data collection and analysis and supported a second phase of quantitative data collection and analysis (Creswell, 2014). The exploratory design would have facilitated a more comprehensive survey design for the population under study.

Scholarship

Chomsky (2017), a well-known American linguistic scientist and philosopher associated with Massachusetts Institute of Technology, is a life-long scholar who consistently models, in my opinion, the responsibility of investigating and communicating insights through a variety of venues. Chomsky's driving energy, passion, and commitment to presenting the complexity of issues, particularly power and control, is further enhanced by an openness to be challenged. My doctoral journey was humble as compared to the scholarship of Chomsky, but the scholarship I completed enhanced and confirmed my personal and professional responsibility to question and support the democratic principles of equity and inclusion. Reviewing the published work of authors and researchers from around the globe gave me an appreciation of the magnitude and

rigor of their work but also beckoned and strengthened me to ask more questions about my own environment. Studying the characteristics of documentation, research designs, ethical issues, evaluation, and other technical and nontechnical skills to conduct research heightened my cognitive, affective, and psychomotor domains of learning. I learned that accessing quality information and resources to guide my work facilitated the progress and completion of the project. In my opinion, scholarship in higher education was a catalyst for complex problem-solving, communicating, and life-long learning to support meaningful and purposeful living within a global community.

Project Development and Evaluation

Project development and evaluation required a creative synthesis and sustained application of multiple strategies based on my personal and professional experiences, including adherence to guidelines, deadlines, documentation rules, open-mindedness, and respectful communication. My routines and supports were critical to maintaining a commitment to the project over the course of 5 years. Evaluation required measureable outcomes while respecting diverse professionals and their individual needs (Elliot, 2014; Murray, 2014). Fortunately, collaboration with doctoral advisors and colleagues improved the design and development of the project by demanding higher expectations. I conducted daily self-evaluations followed by a holistic approach that required reflection on learning, family and community relationships, life and work balance, perseverance, meaningfulness, and physical and emotional behaviors. The development of this viable adult education project with the potential for social change was an inspiring process of creative energies, resources, and critical thinking.

Leadership and Change

Dewey (1916) stated that individuals must rise to the needs of a situation and have confidence and faith in possibilities, suggesting that rigidity and mechanical methods in education result in easy and quick answers that may satisfy one path but that open-mindedness and intellectual growth require an expansion of horizons with new purposes and responses. Dewey posited that leadership does not require immediate solutions or popular answers. During this study, I viewed leadership as a combination of informed and thoughtful actions that facilitated understanding and problem-solving in a community. A leader provides quality resources and services that help others to reflect and move through an evolving change process that will lead to a successful or satisfactory outcome (Brookfield, 2010).

Nobel Peace laureate of 2014, Malala Yousafzai, embodies leadership in education. Despite her gender, age, culture, and physical injury from Taliban fighters in Pakistan, Yousafzai (2013) actively promotes and fund-raises for quality education opportunities for all children. Change in education must be integrated and supported by those who engage in the front-line work of teaching and learning. Based on my varied experiences in education, authoritarian leadership techniques used to bring about change rarely sustained an initiative. Leadership involves acknowledging and supporting assorted interests, abilities, and destinations while remaining open to criticism and challenges (Brookfield, 2013; Palmer, 2007). Dialogue and interactions within a team-based environment to resolve practical problems have enhanced my skills and successes in projects. Course work and interaction with Walden University students, staff, and faculty

led to many conversations that required supporting details, evidence, and reflection about change and decision-making. I was grateful for those on-going challenges toward understanding and self-improvement.

Analysis of Self as Scholar

Scholarship at the doctoral level in adult higher education was a logical and necessary step in my life journey. Scholarship was a means to exploring the complex questions of my profession with a goal of helping others. Published articles and teachers' comments or blogs offered enriching perspectives and trends in education. Scholarship helped me to further explore transformation through learning (see Mezirow, 1991). Today's technology and Internet resources have dramatically influenced the availability of resources; however, the scholar must be extremely cautious in double-checking for reliable and valid evidence in publications.

Scholarship demanded open-mindedness and critical awareness of perspectives, ethics, and protocols of research. Brookfield (2010, 2013) stated that critically examining assumptions, without intimidation, is disruptive and disturbing, but the challenge may lead to alternative modes of thinking and action. My doctoral advisor's suggestion to use the mixed-methods design encouraged me to analyze and interpret both qualitative and quantitative research. Assumptions were challenged beyond my initial beliefs and values. I overcame a phobia of quantitative and statistical analysis by finding good resources and support and with repeated practice over time. Scholarship required self-discipline from me and a thorough investigation to ensure quality and worthiness.

Studying in an online environment was an experiment in furthering my skills as an educator working in a remote community. When I first investigated Walden's doctoral degree options, I was intrigued by the online resources and processes. Previously, my studies in higher education had been face-to-face and burdened with additional time and travel expenses to larger communities. In some cases, degree and course choices were made because of convenience, not authentic interest. Initially, I was skeptical about how an online learning environment could be academically challenging. With completion of the first course, I was convinced of the program's worth and continued my studies with confidence in its standards and practices.

Over several years, I experienced the combination of technology and networking that allowed learners to individually contribute, create, and interact with concepts and ideas. The online environment offered an optimal capacity for making global connections to facilitate learning (Siemens, 2006). While technology is amazing in delivering educational services, it is expensive for individuals to maintain home-based equipment and also pay tuition. My hope is that costs will gradually be reduced, or other alternatives may be offered to learners who aim for higher levels of learning and scholarship in their field of choice.

Analysis of Self as Practitioner

When I was a full-time professor in a postsecondary environment, I made it a daily routine to follow self-refection practices and gain feedback from students and colleagues. In the community college environment, my office door was open most of the time, and students and colleagues were invited to ask questions about their studies or

challenges. Over time, my doctoral studies enhanced my teaching and learning practices. First, I became more aware of the strengths and weaknesses of scholarship and published work. Based on conversations and evaluations, my new skills improved my confidence with students and colleagues. Second, the literature encouraged me to focus more time and energy on facilitating learning activities and improving assessment procedures. In the past 3 decades, the majority of my university professors primarily relied on lectures and essay evaluation, even in teacher training. Therefore, it was a risk-taking experience to become a guide or facilitator of learning and move away from lecturing. Student feedback was positive and prompted me to continue my efforts refining instructions and activities, creating and testing rubrics, and using technology to enhance learning. Improved student assessment results were clear indicators of activity-based learning, despite the additional lesson preparation time. Finally, as I became more confident with technology skills, I used more online learning resources and had higher expectations of my students to also improve those skills. The online learning environment was also a path to self-directed learning, and I observed that college students needed more practice with technology to move forward in reaching their career goals.

Today, I teach international and local college teachers part-time, both face-to-face and online. Their courses are facilitated so that individuals have activity choices; opportunities to practice and collaborate; and occasions to reflect, evaluate, and receive feedback. I am open to alternative assignments, whether online videos or other creative options that will foster empowerment. What is more important to me than lecturing through the course material is that the students are translating, integrating, and actively

demonstrating their learning in a meaningful, measurable, and purposeful way. Today, I am more aware of the challenge of communicating to a diverse audience and employ varied activities and multiple feedback opportunities to ensure understanding and engagement in learning (see Gardner, 1993).

In the field of adult education, the process of self-reflection received considerable attention as one route of assessment and evaluation. It was a significant step forward to examine personal assumptions and bias (Brookfield, 1995). I kept several paper-based journals about my doctoral studies and the reflective comments were revealing of my thinking and learning experiences over time. When I reviewed my notes, I saw that recursive writing and critical reflection helped me learn, change, and develop. Reflection was a tool that assisted me in sorting, filing, and guiding decision-making. For the past 5 years, I systematically built reflection events into adult education curriculum. As a starting point to guide reflection, I often used de Bono's (1990) critical thinking framework of three categories: plus, minus, and interesting.

My first formal teaching position at age 12 was in a church school. I taught kindergarten-aged children for 40 minutes each Sunday and was given a basic curriculum, along with blank paper and wax crayons. From that early initiation, my career was chosen, and I intently observed teachers in many venues to further my knowledge. I respected teachers of all levels for their commitment to helping others and recognized that the work was difficult at times. Palmer (2007) stated that the personal and professional life of a teacher cannot be neatly separated. Palmer's insights and philosophy of education exemplify a holistic approach to integrated living, learning, and

teaching. It will always be my goal, personally or professionally, to create conditions and provide support for individuals' learning in that they too will share their success with others.

Analysis of Self as Project Developer

Project development can be described as sailing a boat through calm and rough waters. Despite comprehensive planning, the weather or unknown factors must be managed effectively to reach a destination. As a captain or as a leader, preparation for the expected and unexpected was necessary. My past professional experiences with large and small college projects were valuable in supporting my doctoral project. As a project developer, I learned that most colleagues were keen to offer advice and support. Communications were improved by inviting questions and providing thorough and timely answers as needed (see Murray, 2014). I gained a greater appreciation for the expertise of others who were generous in helping me to navigate through challenges.

Despite my initial technology fears, electronic survey services offered an affordable and judicious method to contact a population of 600 educators over a large geographical region. Electronic surveys have become very popular in gathering data and are sometimes disregarded by busy professionals. Surprisingly, the initial cover letter of intent to colleges and professors triggered several returned e-mail messages of enthusiastic comments toward the project. One respondent attached a comprehensive document that she felt would benefit my work and was eager to receive a final report. I noted individuals who spent significant time on the survey and who sent follow-up messages to confirm survey completion. I also received a telephone message from a

college president on a Saturday morning to confirm the college's interest and participation. Overall, positive feedback was encouraging as I embarked on data collection. There is no doubt in my mind that there are many caring professionals in the northern college system who are keen to assist with problem-solving and improvement of services.

The Project's Potential Impact on Social Change

The study contributed to positive social change by providing data and resources to support administrators' policy decisions involving teaching and learning in remote community colleges. Potential impact on social change at the local and regional level was two-fold. First, the project raised awareness of isolated midnorthern colleges' and their unique and complex challenges in accessing relevant and high quality professional development for professors of varied disciplines and levels of experience. Second, the project presented a professional development planning workshop with resources to improve and support professors' complex decision-making of professional development choices. Decision-making ultimately impacts on the quality of education for adults attending college. Community colleges, whether large or small, in other regions may also benefit from the project's resources that are readily adaptable to specific learning environments, whether face-to-face or online. Project resources will be shared through provincial college networks with permission to use and adjust accordingly.

Rapid changes in technology and the relationships with global partnerships affect the direction of college programs that respond to communities, nations, and socioeconomic issues (Colleges Ontario, 2015). Although professional development has

held a traditional place of importance in the training or routines of most college educators, competition between professional and personal demands can be overwhelming. Based on survey responses, half of participants were satisfied with their professional development resources while the other half were not satisfied. Feedback from one-third of participants indicated that the colleges' help with customized planning of their professional development would be a benefit. Therefore, a context-specific professional development planning workshop that followed a described set of learning conditions was a positive and valuable action to improve college teaching and learning.

The workshop was designed so that college educators, with a variety of disciplines and experience levels, would initiate the building of a customized plan that could be expanded and adjusted as needed. Concurrently, professors will have an environment and opportunities to request and receive critical information and support from colleagues, resources, and administrative teams. Professional development planning should not be an isolated and limited experience (McCormack et al., 2016). Ideally, a customized plan will be an on-going process or negotiation of combining personal reflection and professional community conversations. Peterson (1999, 2018) placed the responsibility for change on the individual, but he highlighted the importance of meaning and purpose that simultaneously supported the individual, society, and the world.

Implications, Applications, and Directions for Future Research

Misunderstandings or misalignments of professional development policies and priorities in northern colleges have the potential to trigger negative perceptions and behaviors in professors. Several participants' survey comments indicated attitudes of

hopelessness and helplessness when they were repeatedly denied funding for conferences or courses. Therefore, alternative options and processes that are not solely dependent on annual colleges' budget lines for professional development need to be identified, promoted, and reinforced. Data revealed that for 77% of survey participants, informal or non-credited professional development activities were perceived as equally worthy as credited or credentialed work. Formal documentation and recognition of alternative professional development options and rewards for continuous improvement was suggested as an area of further investigation and research. For example, planning and executing self-directed learning utilizing Internet or alternative local resources offered the opportunity to increase professors' professional development choices and placed acknowledged value on their choices and learning. Motivation and value are closely connected (Peterson, 1999, 2018). In most situations, costs to implement college-based workshops and online resources were significantly less as compared to options that required long-distance travelling and accommodations.

College teaching and learning environments are complex and rapidly changing. Many educational traditions or expectations are no longer sustainable because of changing priorities and needs. Educators require more options in defining and accessing professional development (Niehaus & O'Meara, 2015). Greater flexibility in teaching schedules or in accessing resources could maximize opportunities for continuous faculty development. Increased support for annual planning of professional development will indicate the importance of the work and the shared responsibility between professors and

the organization. Data revealed that survey participants valued professional development throughout their careers, but access and affordability were perceived as barriers.

It was apparent that midnorthern college educators' views about their continuing professional development was not well represented in research literature. Their concerns about quality teaching and learning were often minimized as compared to other socioeconomic concerns of students accessing educational opportunities and seeking employment and career success. In addition, increasing costs to operate public institutions dominate political agendas in many small and large communities worldwide. Opening a dialogue and creatively adjusting the scope of professional development may be an opportunity to both enhance and empower adult educators and learners in a variety of environments or conditions.

Future research may involve further studies that explore college professors' beliefs and behaviors around informal and formal professional development choices and options both regionally and provincially. Comparisons between regions and college enrolments may offer data to assist with decision-making as related to quality programming. Trust et al. (2016) identified the potential for tensions between bureaucratic agencies and educators if credit was given for informal learning. Agency, collaboration, inclusion, responsibility, and equity are fundamental concepts of professional development and need to be repeatedly highlighted and examined in a highly competitive world (Niehaus & O'Meara, 2015). Transformative learning in adult educational settings offered a guiding light and a standard toward responsive practices (Mezirow et al., 2009).

Conclusion

My final reflections described the project's strengths, limitations, and recommendations to address the problem differently. Additional research using mixed-methods design was recommended with more emphasis on collaborative survey development using interviews or focus groups within the target population. Scholarship, project development, evaluation, leadership, and change were critically analyzed from a personal and professional perspective. A deeper understanding of my assumptions, values, and behaviors was gained through self-directed learning and critical reflection. I viewed the potential impact on social change as the colleges' roles and responsibilities to nurture and support formal and informal continuous professional development. Implications, applications, and directions for future research were discussed and recommendations were made to continue surveying and exploring how to improve professional development planning and options to maximize teaching and learning success.

References

Alfrey, L., Cale, L., & Webb, L. A. (2012). Physical education teachers' continuing

professional development in health-related exercise. *Physical Education and

Sport Pedagogy, 17*(5), 477-491. doi:10.1080/17408989.2011.594429

Alger, V. E. (2014). Teacher incentive pay that works: A global survey

of programs improving student achievement. Fraser Institute. Retrieved from

http://www.fraserinstitute.org>

Alhadeff-Jones, M. (2012). Transformative learning and the challenges of complexity. In

E. Taylor & P. Cranton (Eds.), *The handbook of transformative learning: Theory,

research, and practice* (pp. 178-194). San Francisco, CA: Jossey-Bass.

Annabi, C. A., & Wilkins, S. (2016). The use of MOOCs in transnational higher

education for accreditation of prior learning, programme delivery, and

professional development. *The International Journal of Educational

Management, 30*(6), 959-975. doi:10.1108/IJEM-05-2015-0057

Association of Canadian Community Colleges. (2012). *Increasing productivity through

incremental innovation. Colleges, institutes & polytechnics: Applied research for

economic and social development.* Ottawa, Canada: Association of Canadian

Community Colleges. Retrieved from http://www.collegesinstitutes.ca/wp-

content/uploads/2014/05 /AR_Vignettes_Eng_final_Jan16_LRb.pdf

Ayiro, L. P. (2012). *A functional approach to educational research methods and

statistics*. Queenston, Canada: Edwin Mellen.

Balan, R., Manko, T., & Phillips, K. (2011). Instructional improvement through

professional development. *Transformative Dialogues: Teaching & Learning Journal, 5*(2), 1-18. Retrieved from http://www.kpu.ca/td

Barron, A. E., Dawson, K., & Yendol-Hoppey, D. (2009). Peer coaching and technology integration: An evaluation of the Microsoft peer coaching program. *Mentoring & Tutoring: Partnership in Learning, 17*(1)*, 83-102. doi:10.1080/13611260802658561

Bazeley, P. (2013). *Qualitative data analysis: Practical strategies*. Thousand Oaks, CA: Sage.

Bean, J. P. (2011). Intellect, light, and shadow in research design. In C. F. Conrad & R. C. Serlin (Eds.), *The SAGE handbook for research in education* (2nd ed.; pp. 165-182). Thousand Oaks, CA: Sage.

Behrstock-Sherratt, E., Bassett, K., Olson, D., & Jacques, C. (2014). *From good to great: Exemplary teachers share perspectives on increasing teacher effectiveness across the career continuum.* Washington, DC: Center on Great Teachers and Leaders at American Institutes for Research.

Bennett, S., & Barp, D. (2008). Peer observation: A case for doing it online. *Teaching in Higher Education, 13*(5)*, 559-570. doi:10.1080/13562510802334871

Best, J. W., & Kahn, J. V. (2006). *Research in education*. New York, NY: Pearson.

Blair, J., Czaja, R. F., & Blair, E. A. (2014). *Designing surveys: A guide to decisions and procedures*. Thousand Oaks, CA: Sage.

Botham, K. A. (2017) The perceived impact on academics' teaching practice of engaging with a higher education institution's CPD scheme. *Innovations in Education and*

Teaching International, 55(2), 164-175. doi:10.1080/14703297.2017.1371056

Botham, K. A. (2018). An analysis of the factors that affect engagement of higher

education teachers with an institutional professional development

scheme. *Innovations in Education and Teaching International, 55*(2), 176-

189. doi:10.1080/14703297.2017.1407664

Bouwma-Gearhart, J. (2012). Science faculty improving teaching practice: Identifying

needs and finding meaningful professional development. *International Journal of*

Teaching and Learning in Higher Education, 24(2), 180-188. Retrieved from

http://www.isetl.org/ijtlhe/

Brady, L. (2009). Shakespeare reloaded: Teacher professional development within a

collaborative learning community. *Teacher Development, 13*(4), 335-348.

doi:10.1080/13664530903578215

Bray, J. (2002). Uniting teacher learning: Collaborative inquiry for professional

development. *New Directions for Adult and Continuing Education, 94,* 83-91.

Retrieved from https://onlinelibrary.wiley.com/loi/15360717

Brookfield, S. D. (1995). *Becoming a critically reflective teacher*. San Francisco, CA:

Jossey-Bass.

Brookfield, S. D. (2010). *Developing critical thinkers: Challenging adults to explore*

alternative ways of thinking and acting. San Francisco, CA: Jossey-Bass.

Brookfield, S. D. (2012). Critical theory and transformative learning. In E. Taylor & P.

Cranton (Eds.), *The handbook of transformative learning: Theory, research, and*

practice (pp. 131-146). San Francisco, CA: Jossey-Bass.

Brookfield, S. D. (2013). *Powerful techniques for teaching adults.* San Francisco, CA: Jossey-Bass.

Brooks, C. F. (2010). Toward 'hybridised' faculty development for the twenty-first century: Blending online communities of practice and face-to-face meetings in instructional and professional support programmes. *Innovations in Education and Teaching International, 47*(3), 261-270. doi:10.1080/14703297.2010.498177

Brooks, C., & Gibson, S. (2012). Professional learning in a digital age. *Canadian Journal of Learning and Technology, 38*(2), 1-17. Retrieved from http://www.cjlt.ca

Buckley, S., & Du Toit, A. (2010). Academics leave your ivory tower: Form communities of practice. *Educational Studies, 36*(5), 493-503. doi:10.1080/03055690903425532

Byrne, J., Brown, H., & Challen, D. (2010). Peer development as an alternative to peer observation: A tool to enhance professional development. *International Journal for Academic Development, 15*(3), 215-228. doi:10.1080/1360144X.2010.497685

Chaudary, I. A., & Imran, S. (2012). Listening to unheard voices: Professional development reforms for Pakistani tertiary teachers. *Australian Journal of Teacher Education, 37*(2), 87-98. doi:10.14221/ajte.2012v37n2.8

Chesney, S., & Benson, J. (2012). 'Anything other than silence': Using a personal learning system for continuing professional development. *Innovations in Education and Teaching International, 49*(1), 73-82. doi:10.1080/14703297.2012.647785

Chester, A. (2012). Peer partnerships in teaching: Evaluation of a voluntary model of

professional development in tertiary education. *Journal of the Scholarship of Teaching and Learning, 12*(2), 94-108. Retrieved from https://scholarworks.iu.edu/journals/index.php/josotl/index

Chomsky, N. (2017). *Who rules the world?* New York, NY: Henry Holt and Company.

Cohen, A., Porath, M., & Bai, H. (2010). Exceptional educators: Investigating dimensions of their practice. *Transformative Dialogues: Teaching and Learning Journal*, *4*(2), 1-13. Retrieved from http://summit.sfu.ca

Colleges Ontario. (2012). *Empowering Ontario: Transforming higher education in the 21st century.* Toronto, Canada. Retrieved from http://www.collegesontario.org/policy-positions/position-papers/Empowering%20Ontario%20(2).pdf

Colleges Ontario. (2014). *Ontario's colleges: An overview*. Retrieved from http://www.collegesontario.org/news/fact-sheets/CO_FACTSHEET_01.pdf

Colleges Ontario. (2015). *Creating opportunities for all*. Retrieved from http://www.collegesontario.org/policy-positions/budget-submissions/2015%20budget%20submission

Colleges Ontario. (2016). *Key performance indicators*. Retrieved from http://www.collegesontario.org/outcomes/key-performance-indicators.html

Collinson, V., Kozina, E., Lin, Y. K., Ling, L., Matheson, I., Newcombe, L., & Zogla, I. (2009). Professional development for teachers: A world change. *Association for Teacher Education in Europe, 32*(1), 3-19. doi:10.1080/02619760802553022

Conference Board of Canada. (2010). *College completion*. Retrieved from

http://www.conferenceboard.ca/hcp/details/education/college-completion.aspx

Costa, A. L, Garmston, R. J., & Zimmerman, D. P. (2014). *Cognitive capital: Investing in teacher quality*. New York, NY: Teachers College Press.

Cranton, P. (1996). *Professional development as transformative learning: New perspectives for teachers of adults*. San Francisco, CA: Jossey-Bass.

Cranton, P. (2006). *Understanding and promoting transformative learning: A guide for educators of adults* (2nd ed.)*.* San Francisco, CA: Jossey-Bass.

Cranton, P. (2016). Continuing professional education for teachers and university and college faculty. *New Directions for Adults & Continuing Education, 2016*(151). doi:10.1002/ace.20194

Cranton, P., & Hoggan, C. (2012). Evaluating transformative learning. In E. Taylor & P. Cranton (Eds.), *The handbook of transformative learning: Theory, research, and practice* (pp. 520-535)*.* San Francisco, CA: Jossey-Bass.

Crawford, K. (2010). Influences on academics approaches to development: Voices from below. *International Journal of Academic Development, 15*(3), 189-202. doi:10.1080/ 1360144X

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Upper Saddle River, NJ: Pearson.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage.

Daloz, L. A. (2012). *Mentor: Guiding the journey of adult learners* (2nd ed.). San Francisco, CA: Jossey-Bass.

Dean, G. (2004). Designing instruction. In M.W. Galbraith (Ed.), *Adult learning methods: A guide for effective instruction* (3rd ed.; pp. 93-118). Malabar, FL: Krieger.

De Bono, E. (1990). *Thinking skills for success*. Eden Prairie, MN: Paradigm.

Denscombe, M. (2008). Communities of practice: A research paradigm for the mixed methods approach. *Journal of Mixed Methods Research, 2*(3), 270-283. doi:10.1177/1558689808316807

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2003). *Strategies of qualitative inquiry*. Thousand Oaks, CA: Sage.

De Vaus, D. (2007). *Surveys in social research*. Crows Nest, Australia: Allen & Unwin.

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed-mode surveys: The tailored design method.* Hoboken, NJ: Wiley.

Dirkx, J. M. (2012). Nurturing soul work: A Jungian approach to transformative learning. In E. Taylor & P. Cranton (Eds.), *The handbook of transformative learning: Theory, research, and practice* (pp.116-130). San Francisco, CA: Jossey-Bass.

Dobozy, E. (2012). Learning in higher education symposia: A new professional development model for university educators. *Issues in Educational Research, 22*(3), 228-245. Retrieved from https://espace.curtin.edu.au

Douglas, J. A., & Edelstein, R. (2009). Whither the global talent pool? *Change,* 36-45. Retrieved from http://www.changemag.org.

DSS Research. (2015). *DSS calculators*. Retrieved from https://www.dssresearch. com/KnowledgeCenter/ToolkitCalculators

Ebert-May, D., Derting, T. L., Hodder, J., Momsen, J. L., Long, T. M., & Jardeleza, S. E. (2011). What we say is not what we do: Effective evaluation of faculty professional development programs. *BioScience, 61*(7), 550-558. doi:10.1525/bio.2011.61.7.9

Edmonds, W. A., & Kennedy, T. D. (2017). *An applied reference guide to research designs.* Thousand Oaks, CA: Sage.

Elliot, R. W. (2014). Faculty development curriculum: What informs it? *Journal of Faculty Development, 28*(3) 35-46. Retrieved from https://www.ingentaconnect.com

Ercikan, K., & Roth, W. (2011). Constructing data. In C. F. Conrad & R. C. Serlin (Eds.), *The SAGE handbook for research in education* (2nd ed.; pp. 219-244). Thousand Oaks, CA: Sage.

Evans, N., & Henrichsen, L. (2008). Long-term strategic incrementalism: An approach and a model for bringing about change in higher education. *Innovative Higher Education, 33*, 111-124. doi:10.1007/s10755-008-9067-y

Fedderson, K. (2008). What's ailing Ontario's colleges and what can faculty do about it. *College Quarterly, 11*(4). Retrieved from http://www.collegequarterly.ca

Fellenz, M. R. (2016). Forming the professional self: Bildung and the ontological perspective on professional education and development. *Educational Philosophy and Theory, 48*(3), 267-283. Retrieved from https://pesa.org.au/our-publications

Fink, A. (2003). *How to sample in surveys*. Thousand Oaks, CA: Sage.

Fink, A. (2013). *How to conduct surveys*. Thousand Oaks, CA: Sage.

Fink, L. D. (2013). *Creating significant learning experiences: An integrated approach to designing college courses*, *revised and updated*. San Francisco, CA: Jossey-Bass.

Fisher, R. (2006). The scholarship of college teaching: Research opportunities in the new millennium. *Journal of Teaching and Learning, 4*(1), 57-71. Retrieved from https://ojs.uwindsor.ca/index.php/JTL

Fisher, R. (2008). *Faculty participation in research at Canadian colleges: A national survey.* Prepared for Canadian Council on Learning. Retrieved from http://www.fanshawec.ca /sites/default/files/file_attachments/fisher2008.pdf

Fisher, R. (2009). A framework for research at Canadian colleges. *College Quarterly, 12*(4). Retrieved from http://collegequarterly.ca

Fletcher, R. (2007). The managerial tutor: A producer of knowledge in a global arena. *Journal of Higher Education Policy and Management, 29*(3), 303-313. Retrieved from https://www.tandfonline.com/loi/cjhe20

Fowler, F. J. (2014). *Survey research methods*. Thousand Oaks, CA: Sage.

Franz, N. (2010). Catalyzing employee change with transformative learning. *Human Resource Quarterly, 21*(1), 113-118. doi:10.1002/hrdq.20033

Galbraith, M. W. (Ed.). (2004). *Adult learning methods: A guide for effective instruction.* Malabar, FL: Kreiger.

Gardner, H. (1993). *Multiple intelligences*: *The theory in practice.* New York, NY: Basic Books.

Glesne, C. (2011). *Becoming qualitative researchers* (4th ed.). Boston, MA: Pearson.

Glowacki-Dudka, M. & Helvie-Mason, L. B. (2011). Adult education at the margins. In

    S. B. Merriam & A. P. Grace (Eds.), *The Jossey-Bass reader on contemporary*

    issues in adult education (pp 56-66)*.* San Francisco, CA: Jossey-Bass.

Goodyear, V.A., Casey, A., & Kirk, D. (2014). Tweet me, message me, like me: Using

    social media to facilitate pedagogical change within an emerging community of

    practice. *Sport, Education and Society, 19* (7*),* 927-943.

    doi:10.1080/13573322.2013.858624

Gordon, G., & Whitchurch, C. (2007). Managing human resources in higher education:

    The implications of a diversifying workforce. *Higher Education Management and*

    Policy, 19(2), 135-155. Retrieved from http://www.oecd

    org/education/imhe/highereducationmanagementandpolicyallaboutthejournal.htm

Government of Canada. (2015). *Statistics Canada*. Retrieved from http://www23.statcan

    .gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=5017

Grabove, V., Kustra, E., Lopes, V., Potter, M. K., Wiggers, R., & Woodhouse, R. (2012).

    Teaching and learning centres: Their evolving role within Ontario colleges and

    universities. Toronto, Canada: Higher Education Quality Council of Ontario.

    Retrieved from http://www.heqco.ca

Gregory, J., & Cusson, M. (2013). *The role of new faculty orientations in improving the*

    effectiveness of postsecondary teaching part 2: College sector. Toronto, Canada:

    Higher Education Quality Council of Ontario.

Griffin, C. (2011). Research and policy in lifelong learning. In S. B. Merriam & A. P.

    Grace (Eds.), *The Jossey-Bass reader on contemporary issues in adult education*

(pp. 120-137). San Francisco, CA: Jossey-Bass.

Hargreaves, A., & Fullan, M. (2012). *Professional capital: Transforming teaching in every school*. New York, NY: Teachers College Press.

Harwell, M. R. (2011). Research design in qualitative/quantitative mixed methods. In C. F. Conrad & R. C. Serlin (Eds.), *The SAGE handbook for research in education* (2nd ed.; pp. 147-163). Thousand Oaks, CA: Sage.

Hassan, S. (2011). The needs and perceptions of academics regarding their professional development in an era of educational transformation. *South African Journal of Higher Education, 25*(3), 476-490. Retrieved from https://journals.co.za/content/journal/high

Hatch, A. (2002). *Doing qualitative research in education settings*. Albany, NY: State University of New York Press.

Heidegger, M. (1978). *Being and time*. Oxford, England: Blackwell.

Henning, T. (2012). Writing professor as adult learner: An autoethnography of online professional development. *Journal of Asynchronous Learning Networks, 16*(2), 9-26. Retrieved from http://sloanconsortium.org/publications/jaln_main

Hicks, M., Weingarten, H. P., Jonker, L., & Liu, S. (2013). *The diversity of Ontario's colleges: A data set to inform the differentiation discussion.* Toronto, Canada: Higher Education Quality Council of Ontario.

Higher Education Quality Council of Ontario. (2012). *The productivity of the Ontario public postsecondary system preliminary report.* Toronto, Canada: Higher Education Quality Council of Ontario.

Higher Education Quality Council of Canada. (2013). *Performance indicators: A report on where we are and where we are going*. Toronto, Canada: Higher Education Quality Council of Ontario.

Higher Education Quality Council of Canada. (2014). *Quick stats*. Retrieved from http://heqco.ca/en-CA/Research/quickstats/Pages/qs_6_1.aspx

Hillman, N., & Weichman, T. (2016). *Education deserts: The continued significance of "place" in the twenty-first century*. Washington, DC: American Council on Education. Retrieved from http://www.acenet.edu/news-room/Documents/Education-Deserts-The-Continued-Significance-of-Place-in-the-Twenty-First-Century.pdf

Hook, R. (2012). *Accountability in Ontario's public colleges.* Retrieved from http://www.collegesontario.org/outcomes/accountability/CO_ACCOUNTABILITY_IN_ONTARIO_PUBLIC_COLLEGES.pdf

Howard, L., & Taber, N. (2010). Faculty development in community colleges: Challenges and opportunities in teaching the teachers. *Brock Education, 20*(1), 34-48. Retrieved from https://journals.library.brocku.ca/brocked/index.

Howell, D. C. (2013). *Statistical methods for psychology*. Belmont, CA: Thomson Higher Education.

Ives, C., McAlpine, L., & Gandell, T. (2009). A systemic approach to evaluating teaching and learning initiatives in post-secondary education. *Canadian Journal of Higher Education, 39*(2), 45-76. Retrieved from https://csshe-scees.ca/publications/canadian-journal-of-higher-education/

Jackson, D. L., Stebleton, M. J., & Laanan, F. S. (2013). The experience of community college faculty involved in a learning community program. *Community College Review, 4*(1), 3-19. doi:10.1177/0091552112473145

Jarvis, P. (2011). Rediscovering adult education in a world of lifelong learning. In S. B. Merriam & A. P. Grace (Eds.), *The Jossey-Bass reader on contemporary issues in adult education* (pp. 113-119). San Francisco, CA: Jossey-Bass.

Johnson, B., & Christensen, L. (2017). *Educational research*. Thousand Oaks, CA: Sage.

Johnson, R., & Kuby, P. (2012). *Stat*. Pacific Grove, CA: Brooks/Cole Cengage Learning.

Kallioinen, O. (2011). Transformative teaching and learning by developing. *Journal of Career and Technical Education, 26*(2), 8-27. Retrieved from https://journalcte.org/

Kamalodeen, V. J. & Jameson-Charles, M. (2016). A mixed methods research approach to exploring teacher participation in an online social networking website. *International Journal of Qualitative Methods, 15*(1)*,* 1-14. doi:10.1177/1609406915624578

Karakhanyan, S., Van Veen, K., & Bergen, T. (2012). Teacher perceptions of Bolgna reforms in Armenian higher education. *European Education, 44*(2), 65-89. doi:10.2753/EUE1056-4934440204

Kasl, E., & Yorks, L. (2002). Collaborative inquiry for adult learning. *New Directions for Adult and Continuing Education, 94*, 3-12. Retrieved from

https://onlinelibrary.wiley.com/journal/15360717

Kasl, E., & Yorks, L. (2012). Learning to be what we know: The pivotal role of
presentational knowing in transformative learning. In E. Taylor & P. Cranton
(Eds.), *The handbook of transformative learning: Theory, research, and practice*
(pp. 503-519)*. San Francisco, CA: Jossey-Bass.

Kasworm, C. E., & Bowles, T. A. (2012). Fostering transformative learning in higher
education settings. In E. Taylor & P. Cranton (Eds.), *The handbook of
transformative learning: Theory, research, and practice* (pp. 338-407)*. San
Francisco, CA: Jossey-Bass.

Kennedy, A. (2014). Models of continuing professional development: A framework for
analysis*. Professional Development in Education, 40*(3), 336-351.
doi:10.1080/19415257.014.929293

Kilgore, D. (2011). Toward a postmodern pedagogy. In S. B. Merriam & A. P. Grace
(Eds.), *The Jossey-Bass Reader on contemporary issues in adult education* (pp.
413-423). San Francisco, CA: Jossey-Bass.

Kimmons, R. & Veletsianos, G. (2014). The fragmented educator 2.0: Social networking
sites, acceptable identity fragments, and the identity constellation. *Computers &
Education, 72*, 292-301. doi:10.1016/j.compedu.2013.12.001

King, K. (2009). *Handbook of the evolving research of transformative learning.*
Charlotte, NC: IAP.

Kitchenham, A. (2008). The evolution of John Mezirow's transformative learning theory.
Journal of Transformative Education, 6(2), 104-123.

doi:10.1177/1541344608322678

Knowles, M. S. (1962). *The adult education movement in the United States.* Austin, TX: Holt, Rinehart and Winston.

Knowles, M. S. (1968). Andragogy, not pedagogy. *Adult Leadership, 16*(10), 350-386.

Knowles, M. S. (1980). *The modern practice of adult education: From pedagogy to andragogy* (2nd ed.). New York, NY: Cambridge Books.

Knowles, M. S., Holton, E. F., & Swanson, R. A. (2005). *The adult learner.* Burlington, MA: Elsevier.

Kohurt, G. F., Burnap, C., & Yon, M. G. (2007). Peer observation of teaching: Perceptions of the observer and the observed. *College Teaching, 55*(1), 19-25. Retrieved from https://www.jstor.org/journal/collegeteaching

Kreber, C. (2013). *Authenticity in and through teaching in higher education: The transformative potential of the scholarship of teaching.* New York, NY: Routledge.

Laakkonen, I. (2015). Doing what we teach: Promoting digital literacies for professional development through personal learning environments and participation. In J. Jalkanen, E. Jokinen, & P. Taalas (Eds.), *Voices of pedagogical development - Expanding, enhancing and exploring higher education language learning* (pp. 171-195). Dublin, Ireland: Research-publishing.net. doi:10.14705/rpnet.2015.000292

Laksov, K. B., Mann, S., & Dahlgen, L. O. (2008). Developing a community of practice around teaching: A case study. *Higher Education Research & Development,*

27(2), 121-132. doi:10.1080/07294360701805259

Lawless, K. A. (2016). False profit or sacrificial lamb? A review of policy, research, and

practice. *Policy Insights from the Behavioral and Brain Sciences, 3*(2), 169-176.

doi:10.1177/2372732216630328

Leibowitz, B., van Schalkwyk, S., & Ruiters, J. (2012). "It's been a wonderful life":

Accounts of the interplay between structure and agency by "good" university

teachers. *Higher Education, 63*, 353-365. doi:10.1007/s10734-011-9444-8

Lindeman, E. (1926). *The meaning of adult education*. Montreal, Canada: Harvest House.

Lindeman, E. C. (2011). For those who need to be learners. In S. B. Merriam & A. P.

Grace (Eds.), *The Jossey-Bass reader on contemporary issues in adult education*

(pp. 8-11). San Francisco, CA: Jossey-Bass.

Lodico, M. G., Spaulding, D. T., & Voegtle, K. H. (2010). *Methods in educational*

research: From theory to practice. Hoboken, NJ: John Wiley & Sons.

Loughran, J. (2013). Pedagogy: Making sense of the complex relationship between

teaching and learning. *Curriculum Inquiry, 43*(1), 118-141.

doi:10.1111/curi.12003

Macia, M., & Garcia, I., (2016). Informal online communities and networks as a source

of teacher professional development: A review. *Teaching and Teacher Education,*

55, 291-307. doi:10.1016/j.tate.2016.01.021

MacKay, K. (2014). *Report on education in Ontario colleges*. Toronto, Canada: OPSEU.

Retrieved from http://www.opseu.org/sites/default/files/2014-03-caat-a-report-on-

education-in-ontario.pdf

Malkki, K., & Green, L. (2014). Navigational aids: The phenomenology of transformative learning. *Journal of Transformative Education, 12*(1), 5-24. doi:10.1177/1541344614541171

Matzat, U. (2013). Do blended virtual learning communities enhance teachers' professional development more than purely virtual ones? A large scale empirical comparison. *Computers & Education, 60*(1), 40-51. doi: 10.1016/j.compedu.2012.08.006

McCormack, C., Ambler, T., Martin, B., Waite, K., & Wilson, A. (2016). Narrative-based evaluation demonstrates the value of a higher education professional learning network. *Studies in Educational Evaluation, 50*, 79-87. doi: org/10.1016/j.stueduc.2016.07.003

McCrickerd, J. (2012). Understanding and reducing faculty reluctance to improve teaching. *College Teaching, 60*, 56-64. doi:10.1080/87567555.2011.633287

McDonald, K. S., & Hite, L. M. (2008). Creating a career culture: Connection and collaboration. *New Horizons in Adult Education and Human Resource Development, 22*(2), 63-68. Retrieved from http://education.fiu.edu/newhorizons

McKeachie, W. J., & Svinicki, M. (2014). *McKeachie's teaching tips: Strategies, research, and theory for college and university teachers.* Belmont, CA: Wadsworth.

McManus, S., & Russell, J. E. A. (2007). Peer mentoring relationships. In B. R. Ragins & K. E. Kram (Eds.). *The handbook of mentoring at work.* (pp. 1-20). Thousand Oaks, CA: Sage. doi:10.4135/978-1-41297-661-9.n11

McPherson, M., Budge, K., & Lemon, N. (2015). New practices in doing academic

 development: Twitter as an informal learning space. *International Journal for*

 Academic Development, 20(2),126-136. doi:10.1080/1360144X.2015.1029485

Merriam, S. (2009). *Qualitative research: A guide to design and implement*. San

 Francisco, CA: Jossey-Bass.

Merriam, S., Caffarella, R., & Baumgartner, L. M. (2007). *Learning in adulthood: A*

 comprehensive guide. San Francisco, CA: Jossey-Bass.

Mezirow, J. (1990). *Fostering critical reflection in adulthood: A guide to transformative*

 and emancipatory learning. San Francisco, CA: Jossey-Bass.

Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco, CA:

 Jossey-Bass.

Mezirow, J. (1997). Transformative learning: Theory to practice. *New Directions for*

 Adult and Continuing Education, 74, 5-12. doi:org/10.1002/ace.7401

Mezirow, J. (2000). Learning to think like an adult. In J. Mezirow (Ed.), *Learning as*

 transformation: Critical perspectives on a theory in progress. (pp. 3-34). San

 Francisco, CA: Jossey-Bass.

Mezirow, J. (2012). Learning to think like an adult: Core concepts of transformation

 theory. In E. Taylor, P. Cranton & Associates (Eds.), *The handbook of*

 transformative learning: Theory, research, and practice (pp. 73-115)*.* San

 Francisco, CA: Jossey-Bass.

Mezirow, J., Taylor, E. W., Alcántara, L., Brookfield, S., Butterwick, S., Cranton, P.,

 …Yorks, L. (2009). *Transformative learning in practice: Insights from*

community, workplace, and higher education. San Francisco, CA: Jossey-Bass.

Miller, M. T., Bai, K., & Newman, R. E. (2012). A critical examination of sabbatical application policies: Implications for academic leaders. *College Quarterly, 15*(2). Retrieved from https://www.collegequarterly.ca/

Mitchell, B., & Geva-May, B. (2009). Attitudes affecting on-line learning implementation in higher education institutions. *Journal of Distance Education, 23*(1), 71-88. Retrieved from https://www.questia.com/library/p439531/journal-of-distance-education-online

Murray, J. (2014). *Designing and implementing effective professional learning.* Thousand Oaks, CA: Corwin.

Musanti, S. I., & Pence, L. (2010). Collaboration and teacher development: Unpacking resistance, constructing knowledge, and navigating identities. *Teacher Education Quarterly*, *37*(1), 73-89. Retrieved from http://www.teqjournal.org/

Nicoll, W. G. (2014). Developing transformative schools: A resilience-focused paradigm for education. *The International Journal of Emotional Education, 6*(1), 47-65. Retrieved from https://www.um.edu.mt/ijee

Niehaus, E., & O'Meara, K. (2015). Invisible but essential: The role of professional networks in promoting faculty agency in career advancement. *Faculty Publications in Educational Administration, 36.* Retrieved from http://digitalcommons.unl.edu/cehsedadfacpub/36

O'Meara, K., & Lapointe Terosky, A. (2010). Engendering faculty professional growth. *Change*, *42*(6), 45-51. Retrieved from http://www.changemag.org

O'Meara, K., & Lapointe Terosky, A. (2011). Assuming agency: The power of strategy

    and networks. *Liberal Education*, *97*(3/4), 54-59. Retrieved from

    https://www.aacu.org/liberaleducation/about

O'Meara, K., Lapointe Terosky, A., & Neumann, A. (2008). Faculty careers and work

    lives: A professional growth perspective. *ASHE Higher Education Report, 34*(3).

    San Francisco, CA: Jossey-Bass.

Ontario Colleges of Applied Arts and Technology. (2017). *Academic employees'*

    collective agreement. Toronto, Canada: Ontario Public Service Employee Union.

Ontario College Quality Assurance Service. (2014). *Program quality assurance process*

    audits (PQAPA) operation manual. Retrieved from http://www.ocqas.org/en/wp-

    content/uploads/2013/12/Orientation%20Manual.pdf

Ontario Ministry of Training, Colleges and Universities. (2014a). *Colleges' key*

    performance indicators. Retrieved from

    http://www.tcu.gov.on.ca/eng/general/postsec/colindicator.html

Ontario Ministry of Training, Colleges and Universities. (2014b). *Post-secondary*

    education. Retrieved from https://www.tcu. gov.on.ca/eng/

Ontario Ministry of Training, Colleges and Universities. (2015). *Northern colleges work*

    together to expand access to programs. Retrieved from

    https://news.ontario.ca/tcu/en/2015/04/northern-colleges-work-together-to-

    expand-access-to-programs.html

Onwuegbuzie, A. J., & Leech, N. L. (2006). Linking research questions to mixed

    methods data analysis procedures. *The Qualitative Report*, *11*(3), 474-498.

Organization for Economic Cooperation and Development. (2009). *OECD teaching and learning international survey (TALIS)*. Retrieved from http://www.oecd.org/edu/school/43081350.pdf

Organization for Economic Cooperation and Development. (2013). *Education at a glance 2013: OECD indicators.* Paris, France: OECD.

Owenby, P. H. (2011). Organizational learning communities and the dark side of the learning organization. In S. B. Merriam & A. P. Grace (Eds.), *The Jossey-Bass reader on contemporary issues in adult education* (pp. 280-290). San Francisco, CA: Jossey-Bass.

Palmer, P. J. (2007). *The courage to teach: Exploring the inner landscape of a teacher's life*. San Francisco, CA: Jossey-Bass.

Palys, T., & Atchison, C. (2008). *Research decisions: Quantitative and qualitative perspectives* (4th ed.). Toronto, Canada: Thomson Nelson.

Parker, C., Morrell, C., Morrell, C., & Chang, L. (2016). Shifting understandings of community college faculty members: Results of an equity-focused professional development experience. *The Journal of Faculty Development, 30*(3), 41-47. Retrieved from https://newforums.com/our-titles/journals/the-journal-of-faculty-development/

Parker, P., Hall, D. T., & Kram, K. E. (2008). Peer coaching: A relational process for accelerating career leaning. *Academy of Management Learning & Education*, *7*(4), 487-503. Retrieved from http://aom.org/Publications/AMLE/Academy-of-Management-Learning---Education.aspx

Pataraia, N., Margaryan, A., Falconer, I., & Littlejohn, A. (2015). How and what do academics learn through their personal networks. *Journal of Further and Higher Education, 39*(3), 336-357. doi:10.1080/0309877X.2013.831041

Patton, M. Q. (2002). *Qualitative research & evaluation methods.* Thousand Oaks, CA: Sage.

Paul, R., & Elder, L. (2014). *Critical thinking.* Upper Saddle River, NJ: Pearson.

Peterson, J. B. (1999). *Maps of meaning: The architecture of belief.* New York, NY: Routledge.

Peterson, J. B. (2018). *12 rules for life: An antidote to chaos.* Toronto, Canada: Random House Canada.

Plano Clark, V. L., & Creswell, J. W. (2008). *The mixed methods reader.* Thousand Oaks, CA: Sage.

Plano Clark, V. L., & Creswell, J. W. (2018). *Designing and conducting mixed methods research.* Thousand Oaks, CA: Sage.

Price, E., Coffey, B., & Nethery, A. (2015). The experience of being a lecturer in further and higher education. *Journal of Further and Higher Education, 39*(5), 680-698. Retrieved from https://www.tandfonline.com/loi/cjfh20

Price, L., & Kirkwood, A. (2014). Informed design of educational technology for teaching and learning? Towards an evidence-informed model of good practice. *Technology, Pedagogy and Education, 23*(3), 325-347. doi:10.1080/1475939X.2014.942749

PricewaterhouseCoopers LLP. (2017). *Fiscal sustainability of Ontario colleges*.

   Retrieved from https://collegesontario.org/policy-positions/position-

   papers/Fiscal%20Sustainability%20of%20Ontario%20Colleges%20Final%2004.0

   1.16.pdf

Punch, K. F. (2009). *Introduction to research methods in education*. Thousand Oaks, CA:

   Sage.

Rea, L. M., & Parker, R. A. (2014). *Designing and conducting survey research: A*

   comprehensive guide. San Francisco, CA: Jossey-Bass.

Reio, T. G. (2007). Survey nonresponse bias in social sciences research. *New Horizons in*

   Adult Education & Human Resource Development, 21(1-2), 48-51. Retrieved

   from https://onlinelibrary.wiley.com/journal/19394225

Riveros, A., Newton, P., & Burgess, D. (2012). A situated account of teacher agency and

   learning: Critical reflections on professional learning communities. *Canadian*

   Journal of Education, 35(1), 202-216. Retrieved from http://cje-rce.ca/#

Rodgers, R., Christie, J., & Wideman, M. (2014). *The effects of a required faculty*

   development program on novice faculty self-efficacy and teaching. Toronto,

   Canada: Higher Education Quality Council of Ontario. Retrieved from

   www.heqco.ca

Rogers, C. R. (1961). *On becoming a person: A therapist's view of psychotherapy*.

   Boston, MA: Houghton Mifflin.

Russell, W. (2008). Reflections on reflective learning in professional formation. *Studies*

   in the Education of Adults, 40(2), 176-191. Retrieved from

https://www.tandfonline.com/loi/rsia20

Sappington, N., Pacha, J., Baker, P., & Gardner, D. (2012). The organized contradictions

of professional development and social improvement. *International Journal of*

Educational Leadership Preparation, 7(1), 1-11. Retrieved from

http://www.ncpeapublications.org

Saris, W. & Gallhofer, I. N. (2014). *Design, evaluation, and analysis of questionnaire for*

survey research. Hoboken, NJ: Wiley.

Saunders, R. (2012). Assessment of professional development for teachers in the

vocational education and training sector: An examination of the concerns based

adoption model. *Australian Journal of Education, 56*(2), 182-204. Retrieved from

https://www.acer.org/aje

Scoppio, G., & Covell, L. (2016). Mapping trends in pedagogical approaches and

learning technologies: Perspectives from the Canadian, international, and military

education. *Canadian Journal of Higher Education, 46*(2) 127-147. Retrieved from

https://csshe-scees.ca/publications/canadian-journal-of-higher-education/

Seltzer, M., & Rose, M. (2011). Constructing analyses: The development of

thoughtfulness in working with quantitative methods. In C. F. Conrad & R. C.

Serlin (Eds.), *The SAGE handbook for research in education* (2nd ed.; pp. 245-

262). Thousand Oaks, CA: Sage.

Servage, L. (2009). The scholarship of teaching and learning and the neo-liberalization of

higher education: Constructing the entrepreneurial learner. *Canadian Journal of*

Higher Education, 39(2), 25-44. Retrieved from https://csshe-

scees.ca/publications/canadian-journal-of-higher-education/

Schols, M. (2012). Examining and understanding transformative learning to foster technology professional development in higher education. *International Journal of Emerging Technologies in Learning, 7*(1), 42-49. Retrieved from http://www.i-jet.org/

Schon, D. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions.* San Francisco, CA: Jossey-Bass.

Shagrir, L. (2012). How evaluation processes affect the professional development of five teachers in higher education. *Journal of the Scholarship of Teaching and Learning, 12*(1), 23-35. Retrieved from https://scholarworks.iu.edu/journals/index.php/josotl/index

Shagrir, L. (2017). Collaborating with colleagues for the sake of academic and professional development in higher education, *International Journal for Academic Development, 22*(4), 331-342. doi:10.1080/1360144X.2017.1359180

Shortland, S. (2010). Feedback within peer observation: Continuing professional development and unexpected consequences. *Innovations in Education and Teaching International, 47*(3), 295-304. doi:10.1080/14703297.2010.498181

Siemens, G. (2006). *Knowing knowledge*. Retrieved from http://www.knowingknowledge.com

Skolnik, M. (2010). A look back at the decision on the transfer function at the founding of Ontario's Colleges of Applied Arts and Technology. *Canadian Journal of Higher Education, 40*(2), 1-17. Retrieved from https://csshe-

scees.ca/publications/canadian-journal-of-higher-education/

Smith, E. (2011). Teaching critical reflection. *Teaching in Higher Education, 16*(2), 211-223. doi:10.1080/13562517.2010.515022

Stake, R. (1995). *The art of case study research.* Thousand Oaks, CA: Sage.

Stenfors-Hayes, T., Weurlander, M., Dahlgren, L. O., & Hult, H. (2010). Medical teachers' professional development – perceived barriers and opportunities. *Teaching in Higher Education, 15*(4), 399-408. doi:10.1080/13562517.2010.493352

Su, Y. (2011). The constitution of agency in developing lifelong learning ability: The 'being' mode. *Higher Education, 62*, 399-412. doi:10.1007/s10734-010-9395-6

Tadesse, T., & Gilles, R. (2015). Nurturing cooperative learning pedagogies in higher education classrooms: Evidence of instructional reform and potential challenges. *Current Issues in Education, 18*(2), 1-17. Retrieved from http://cie.asu.edu/

Tagg, J. (2012). Why does the faculty resist change? *Change*, 6-15. Retrieved from http://www.changemag.org

Tang, S., & Choi, P. L. (2009). Teachers' professional lives and continuing professional development in changing times. *Educational Review, 61*(1), 1-18. doi:10.1080/00131910802684748

Taylor, E. W., & Cranton, P. (2012). Reflecting back and looking forward. In E. Taylor & P. Cranton (Eds.), *The handbook of transformative learning: Theory, research, and practice* (pp. 555-573)*.* San Francisco, CA: Jossey-Bass.

Taylor, E. W., & Snyder, M. J. (2012). A critical review of research on transformative

learning theory, 2006-2010. In E. Taylor & P. Cranton (Eds.), *The handbook of transformative learning: Theory, research, and practice* (pp. 37-55). San Francisco, CA: Jossey-Bass.

Taylor, K., & Elias, D. (2012). Transformative learning: A developmental perspective. In E. Taylor & P. Cranton (Eds.), *The handbook of transformative learning: Theory, research, and practice* (pp. 147-161). San Francisco, CA: Jossey-Bass.

Teddlie, C., & Yu, F. (2007). Mixed methods sampling: A typology with examples. In V. L. Plano Clark & J. W. Creswell (Eds.), *Mixed methods reader* (pp. 199-228). Thousand Oaks, CA: Sage.

Teras, H., (2016). Collaborative online professional development for teachers in higher education. *Journal of Professional Development in Education, 42*(2), 258-275. doi:10.1080/19415257.2014.961094

Terrell, S. R. (2012). Mixed-methods research methodologies. *The Qualitative Report, 17*(1), 254-280. Retrieved from http://www.nova.edu

Tisdell, E. (2012). Themes and variations of transformative learning: Interdisciplinary perspectives on forms that transform. In E. Taylor & P. Cranton (Eds.), *The handbook of transformative learning: Theory, research, and practice* (pp. 21-36). San Francisco, CA: Jossey-Bass.

Tour, E. (2017). Teachers' personal learning networks (PLNs): Exploring the nature of self-initiated professional learning online. *Literacy, 51*(1), 11-18. doi:10.1111/lit.12101

Townsend, B. K., Donaldson, J., & Wilson, T. (2009). Marginal or monumental?

Visibility of community colleges in selected higher-education journals. *Community College Journal, 33*(9), 708-720. Retrieved from https://www.aacc.nche.edu/publications-news/community-college-journal/

Trust, T., Carpenter, J. P., & Kruka, D. G. (2017). Moving beyond silos: Professional learning networks in higher education. *The Internet and Higher Education, 35*, 1-11. doi:10.1016/j.iheduc.2017.06.001

Trust, T., Krutka, D. G., & Carpenter, J. P. (2016). Together we are better: Professional learning networks for teachers. *Computer & Education, 102,*15-34. doi:10.1016/j.compedu.2016.06.007

Tseng, F. C., & Kuo, F. Y. (2014). A study of social participation and knowledge sharing in the teachers' online professional community of practice. *Computers & Education, 72*, 37-47. Retrieved from https://www.journals.elsevier.com/computers-and-education

Turner, R., & Gosling, D. (2012). Rewarding excellent teaching: The translation of a policy initiative in the United Kingdom. *Higher Education Quarterly, 66*(4), 415-430. doi:10.1111/j.1468-2273.2012.00530.x

Twombly, S. B., & Townsend, K. B. (2008). Community college faculty: What we know and need to know. *Community College Review, 36*(1), 5-24. Retrieved from http://journals.sagepub.com/loi/crw

VanDerLinden, K. (2014). Blended learning as transformational institutional learning. *New Directions for Higher Education, 165*, 75-85. doi:10.1002/he.20085

van Manen, M. (2002). *Writing in the dark*. London, Canada: Althouse.

Van Waes, S., DeMaeyer, S., Moolenaar, N. M., Van Petegem. P., & Van den Bossche, P. (2018). Strengthening networks: A social network intervention among higher education teachers. *Learning and Instruction, 53*, 34-49. doi:10.1016/j.learninstruc.2017.07.005

Vella, J. (2008). *On teaching and learning: Putting the principles and practices of dialogue education into action.* San Francisco, CA: Jossey-Bass.

Voller, J. G. (2011). *Implications of professional development and reward for professional academic advisors.* Retrieved from the NACADA Clearinghouse for Academic Advising Resource Web Site: http://www.nacada.ksu. edu/Resources/Clearninghouse/View-Articles/Implications-for-professional-development-2100-National-Survey.aspx

Watkins, K., Marsick, V. J., & Faller, P. G. (2012). Transformative learning in the workplace. In E. Taylor & P. Cranton (Eds.), *The handbook of transformative learning: Theory, research, and practice* (pp. 373-387). San Francisco, CA: Jossey-Bass.

Webster-Wright, A. (2009). Reframing professional development through understanding authentic professional learning. *Review of Educational Research, 79*(2), 702-739. doi:10.3102/0034654308330970

Webster-Wright, A. (2010). *Authentic professional learning: Making a difference through learning at work.* New York, NY: Springer.

West, C. (2011). Action research as a professional development activity. *Arts Education Policy Review, 112*, 89-94. doi:10.1080/10632913.2011.546697

Whitchurch, C., Skinner, M., & Lauwerys, J. (2009). Recent developments in relation to professional staff in UK higher education. *Australian Universities' Review, 51*(1), 56-60. Retrieved from https://www.aur.org.au/

Wynants, S., & Dennis, J. (2018). Professional development in an online context: Opportunities and challenges from the voices of college faculty. *Journal of Educators Online, 15*(1), 1-14. Retrieved from https://www.thejeo.com/

Yin, R. K. (2009). *Case study research: Design and methods*. Thousand Oaks, CA: Sage.

Yousafzai, M. (2013). *I am Malala*. London, England: Orion.

Zarifa, D., Hango, D., & Millan, R. P. (2018). Proximity, prosperity, and participation: Examining access to postsecondary education among youth in Canada's provincial north. *Rural Sociology, 83*(1-2), 270-314. doi:10.1111/ruso.12183

Zhao, H., Coombs, S., & Zhou, X. (2010). Developing professional knowledge about teachers through metaphor research: Facilitating a process of change. *Teacher Development, 14*(3), 381-395. doi:10.1080/13664530.2010.504024

Appendix A: Community College Professors' Professional Development Planning
Workshop

Customizing Your Professional Development: Planning and Supporting

Overview: Participants will critically review and analyze research and experienced-based strategies for supporting continuous learning and personal and professional networks, along with the goal of initiating an individualized professional development plan that relates to improving student success at the college.

Workshop list of resources and references are located on the last pages of this document.

DAY 1 AGENDA

8:30–9:00   **Welcome and Introductions**

Summary: Participants will review the results and findings of Community College

Professors' Professional Development Survey (CCPPDS) and investigate the role of

theories, collaboration, and critical reflection as related to preparing a professional

development plan.

Ice-breaker

Instructions: Participants are invited to share a few words about what they enjoy most

about working in the field of college teaching and learning.

9:00–10:30   **Session 1A:**

Overview of Community College Professors' Professional Development Survey

(CCPPDS) Results and Findings

Instructions: Question or comment on the survey data and interpretations. Written

questions may be submitted at the break and will be treated anonymously or

confidentially, as requested. Further survey discussions will take place throughout the

workshops when appropriate.

Survey Background:

This self-administered survey gathered information about full-time college professors' professional development perceptions and practices. Full-time professors are designated as holding a regular full-time bargaining unit position within your community college.

In this survey, professional development is defined as experiences that develop an individual's knowledge, skills, and expertise as an educator. Participation was completely voluntary. These questions are about professional development experiences and thoughts. There are no right or wrong answers and responses will be treated confidentially. There are no financial compensation or reimbursements for participating in this study.

1. Are you a full-time community college professor?

    Yes [120]　　　　　No [ ]

2. On a scale of 1 to 5, indicate the degree to which you support the
   following statements about informal or formal professional development.

Perceptions of Informal and Formal Professional Development (Survey Question 2)

Perceptions	Dis-agree	Neutral	Agree	*M*	*SD*	#
Improves my teaching effectiveness.	2 1.66%	6 5.00%	112 93.33%	4.42	0.71	120 100%
Encourages my continuous learning.	3 2.52%	6 5.04%	110 92.43%	4.49	0.75	119 99.17%
Helps me to expand my professional networks.	4 3.33%	18 15.00%	98 81.67%	4.13	0.78	120 100%
Helps me increase my income.	57 48.72%	31 26.50%	29 24.78%	2.72	1.07	117 97.50%

Note. # = number of responses
Perceptions are listed in descending rank order based on a combined total percentage
of Agree (4) and Strongly Agree (5) responses.

Highlights: Perceptions are very positive about professional development
improving teaching and learning effectiveness and expanding networks, but
there are lower results for perceptions involving alternative career
development and increasing income.

3. On a scale of 1 (low importance) to 5 (high importance), please rank the importance of the following professional development options based on your present needs and interests. Each statement must have a different number value.

Importance Ranking of Professional Development Options (Survey Question 3)

Options	1 & 2 (low)	3	4 & 5 (high)	*M*	*SD*	#
Current subject area or trade	20 19.05%	21 20%	64 60.95%	3.74	1.39	105 87.50%
Teaching & learning theories and methods	28 29.48%	24 25.26%	43 45.27%	3.28	1.20	95 79.10%
Digital technologies & web tools	31 33.33%	25 26.88%	37 39.79%	3.14	1.34	93 77.50%
New subject area or trade	48 46.60%	21 20.39%	34 33.01%	2.79	1.39	103 85.80%
Applied or academic research skills	71 61.74%	15 13.04%	29 25.22%	2.31	1.34	115 95.80%

Note. # = number of responses. Perceptions are listed in descending rank order based on combined total percentage of Important (4) and High Importance (5) responses.

Highlights: Low professional development interest areas were in learning new subject areas and applied or academic research skills.

4. During the past academic year, how often did you engage in informal and formal professional development activities as listed below?

Informal and Formal Professional Development Engagement (Survey Question 4)

Engagement	Daily	Weekly	Monthly	3–4 Yearly	Rarely	#
I participated in online workshops & events involving Colleges Ontario.	0	2 1.68%	5 4.20%	21 17.65%	91 76.47%	119 99.17%
I gained ideas & resources from socializing with family & friends.	4 3.39%	11 9.32%	26 22.03%	34 28.81%	43 36.44%	118 98.33%
I participated in workshops & events at my college.	0	2 1.68%	19 15.97%	64 53.78%	34 28.57%	119 99.17%
I received ideas & resources from colleagues at my college.	5 4.24%	32 27.12%	24 20.34%	33 27.97%	24 20.34%	118 98.33%
I gave ideas & resources to colleagues at my college.	11 9.32%	37 31.36%	24 20.34%	28 23.73%	18 15.29%	118 98.33%
I utilized online technologies & resources for learning & teaching.	31 26.05%	38 31.93%	19 15.97%	16 13.45%	15 12.61%	119 99.17%
I gained ideas & resources from interactions with students.	12 10.17%	33 27.97%	35 29.66%	24 20.34%	14 11.86%	118 98.33%

Note. f-2-f = face to face; # = number of responses. Responses are listed in descending rank order based on percentage of Rarely.

5. With a focus on your teaching and learning needs in a continuously changing postsecondary environment, please identify resources that would significantly influence and support long-term planning regarding your professional development. (Briefly explain your response.)

Structural Coding and Integration of Themes (Survey Question 5)

Phase 1	Phase 2	Phase 3
• Update computer equipment • Update technical skills	• Technology training: hardware & software	• Technology training: hardware & software ($f = 18.86\%$)
• In-house teaching & learning • Local resources	• In-house teaching & learning • Local resources	• Local teaching & learning resources ($f = 8.57\%$)
• Administrative support • PD listings/options • Approval process • Vision & guidelines	• Access to PD guidelines • Supportive communication with administrators: vision	• Supportive communication with administrators: vision & guidelines ($f = 8\%$)

Note. PD = Professional Development.
Final phase themes are listed in descending rank order of percentages.

6. On a scale of 1 to 5, indicate the degree to which you support the following statements. *(Please mark one choice in each row.)*

Perceptions of Professional Development (Survey Question 6)

Perceptions	1 & 2 Disagree	3 Neutral	4 & 5 Agree	*M*	*SD*	#
PD is a joint responsibility.	3 2.50%	5 4.17%	112 93.34%	4.37	0.72	120 100%
F-2-f conversations are critical.	2 1.68%	10 8.40%	107 89.92%	4.26	0.68	119 99.17%
PD is a personal responsibility.	11 9.17%	15 12.50%	94 78.33%	3.95	0.93	120 100%
Noncredit courses are important.	5 4.17%	22 18.33%	93 77.50%	4.04	0.87	120 100%
Cross-discipline collaborative learning has benefits.	3 2.50%	26 21.67%	91 75.83%	3.97	0.81	120 100%
Online resources & networks are critical.	11 9.13%	24 20%	85 70.83%	3.87	1.00	120 100%
Overall, I am satisfied with my level of PD engagement.	37 30.84%	24 20%	59 49.16%	3.25	1.16	120 100%

Note. PD = professional development; f-2-f = face-to-face; # = number of responses. Perceptions are listed in descending rank order based on a combined total percentage of Agree and Strongly Agree responses.

7. How many years have you been working full-time at your <u>present</u> community college (including your probationary time)?

Present Community College Teaching Experience (Survey Question 7)

Years	f	%
0–4	11	9.20%
5– 9	22	18.30%
10–14	38	31.60%
15–19	24	20.00%
20 –4	9	7.50%
25– 29	8	6.70%
30+	8	6.70%
Total	N =120	100%

Years of Teaching and Satisfaction with Professional Development (Survey Questions 6 & 7)

Years	Disagree	Neutral	Agree	Total
0–4	3 27.30%	3 27.30%	5 45.50%	11 9.20%
5–9	5 22.70%	9 40.90%	8 36.40%	22 18.30%
10–14	8 21.10%	6 15.80%	24 63.10%	38 31.70%
15–19	10 41.70%	3 12.50%	11 45.90%	24 20%
20–24	3 33.30%	1 11.10%	5 55.60%	9 7.50%
25–29	3 37.50%	2 25%	3 37.50%	8 6.70%
30 +	5 62.50%	0	3 37.50%	8 6.70%
N				120 100%

8. What is your age group?

9. What is your gender?

Age and Gender of Survey Respondents (Survey Questions 8 and 9)

Age Groups	*f*	Female	Male	%
20–29	0	0	0	0%
30–39	12	7 (58.30%)	5 (41.70%)	10.00%
40–49	30	18 (60.00%)	12 (40.00%)	25.00%
50–59	56	32 (57.00%)	24 (43.00%)	46.70%
60–69	22	8 (36.40%)	14 (63.60%)	18.30%
70+				
Total	*N* = 120	65 (54.20%)	55 (45.80%)	100%

10:30–11:45   Mid-morning Break

10:45–11:45   **Session 1B:**

The Role of Adult Learning Theories and Educational Research

Instructions: Theories are valuable tools in understanding and making changes in higher education. Review a theory, orientation, or perspective from the list below or choose one from your own reading and experience. The concept may be familiar or new, but it should be of interest to you.

Within a working group (maximum of three people), prepare a brief 5-minute overview of one choice to share with participants. Include your opinions about its significance, strengths and limitations in the college environment. Explain how the theory, orientation, or perspective may help to guide teaching, learning, and professional development.

Questions to guide your responses are listed below the chart. Chart paper and markers

or an electronic file and data projector are available to share your results.

Your results will be shared following the lunch break. Please add and share other helpful

video recommendations to the chart, if possible.

1B Resources: Here are some video resources to consider as you investigate theories.

Attached theorists' names are merely suggestions and not necessarily the only resource

option.

Video Resources

Andragogy (M. Knowles)	**Multiple Intelligence** (H. Gardner)
Malcolm Knowles Adult Learning Theory – Andragogy by Deborah M. Taylor. Posted Nov. 19, 2013. (8 min.) https://www.youtube.com/watch?v=lsvgMSGn3rY What is Andragogy? The Audiopedia. Posted Aug. 23, 2017. (12 min.) https://www.youtube.com/watch?v=6_aXMk4w258	Howard Gardner of The Multiple Intelligence Theory by Derrick Purefoy. Posted Nov. 7, 2009 (8 min.) https://www.youtube.com/watch?v=l2QtSbP4FRg 8 Intelligences – Theory of Multiple Intelligence Explained – Dr. Howard Gardner. Practical Psychology. Posted Apr. 2, 2016. (5 min.) https://www.youtube.com/watch?v=s2EdujrM0vA
Critical Theory (S. Brookfield)	**Postmodern** (M. Newman)
Author Stephen Brookfield on Critical Thinking. Wiley. Posted on Feb. 12, 2013. (2 min.) https://www.youtube.com/watch?v=S4R7clM8R7A	A Theory of Everything. TED2002 by Emily Levine. (21 min.) https://www.ted.com/talks/emily_levine_s_theory_of_everything/up-next
Critical Thinking (E. de Bono)	**Self-Directed Learning**
Edward de Bono on the A-Z of Creative Thinking in Business.	The Revolution of Self-directed Learning. TEDxFlourCity by Sean Bengry. Posted Sept. 19, 2014. (9 min.).

Leadersin. Posted on Oct. 22, 2015. (14 min.). https://www.youtube.com/watch?v=Hu1WjHvwGUs	https://www.youtube.com/watch?v=3L9qU7Y-oaA
Experiential Learning (J. Dewey; D. Kolb) Reinventing Experiential Learning. TEDxColegioAngloColombiano by Martin A. Lanner. Posted Jan. 20, 2017. (11 min.) https://www.youtube.com/watch?v=yZnISCZz4js	**Spirituality and Learning** (E. J. Tisdell; P. Palmer) Chapter 1: The Primacy of Soul (Parker J. Palmer). C&R Videos. Posted on Dec. 9, 2015. (4 min.). https://www.youtube.com/watch?v=i8PxnElLu8E
Feminist Perspectives and Learning We Should All Be Feminists. TEDXEuston by Chimamanda N. Adichie. Posted on Apr. 12, 2013. (30 min.). https://www.youtube.com/watch?v=hg3umXU_qWc	**Traditional Learning Theories** (Behaviorist, Cognitivist, Constructivist & Connectivism) Resources: A Brief Overview of 4 Learning Theories by Jo Harris. Posted Feb. 24, 2014 (6 min.) https://www.youtube.com/watch?v=ACowHxGEAUg Learning Theories by Travis Lee. Posted Feb. 25, 2016 (9 min.) https://www.youtube.com/watch?v=B2bsyT2S82I
Mentorship (L.A. Daloz) Science of Mentorship. TEDxMuskegon by Shawn Blanchard. Posted Nov. 21, 2016. (15 min.). https://www.youtube.com/watch?v=hh46lVSKWHc	**Transformational Learning** (J. Mezirow) Conversation at Home with Jack Mezirow. By Nancee Bloom. Posted on Jul. 6, 2015. (57 min.). https://www.youtube.com/watch?v=iEuctPHsre4
Adult Motivation (R. J. Wlodkowski)	**Other choices related to adult education**: (e.g., Universal Instructional Design, Mentorship, Learning Communities)

Do Schools Kill Creativity? TED2006 by Ken Robinson (18 min.) https://www.ted.com/talks/ken_robinson	

1B Activity Evaluation Guide:

Instructions: Each guiding statement is of equal value in contributing toward the class discussion.

1. The significance of the theory or perspective is clearly outlined as related to teaching in a college environment.

2. Strengths are described with supporting examples and evidence based on teaching experience.

3. Limitations or critiques are included and backed up with specific examples or evidence.

4. Usefulness of this theory or perspective in designing or guiding a professional development plan is explained.

12:00–1:00   Lunch

1:00–2:15   **Session 1C:**

Presentations (voluntary order)

Instructions: Questions and answers will follow each presentation.

2:15–2:30   1C Reflection:

Instructions: Answer at least one the following questions and submit to facilitators by the end of the day.

1. How effective were the presentations in motivating you to consider additional follow-up on reviewing theories or research?

2. How did the presentations exemplify the role of theory and research in adult learning?

3. Is there a theory you would like to further investigate? Explain your rationale.

2:30–2:45 Break

2:45–4:00 **Session 1D:**

Benefits and Challenges of Collaborative Learning

Instructions: Working within a group of three participants, find, view, and share video clips or other resources about collaborative learning that outline key concepts. Use your resources as a guide to discuss the following questions:

1. What are the skills and supports needed to utilize and enhance collaborative learning?

2. Describe three practical operational strategies to achieve success when employing collaborative learning with teachers or colleagues?

3. Describe two or three possible problems or limitations that should be addressed in collaborative learning environments or partnerships.

Each participant should be prepared to share discussion results and resources with classmates.

1D Activity Evaluation Guide:

Instructions: Each guiding statement is of equal value in contributing toward the class discussion.

1. Key concepts about collaborative learning are thoroughly described along with required skills and supports.

2. Strategies are explained recognizing diversity of learners' skills and abilities.

3. Rules or guidelines for collaborative learning are clear but offer flexibility as needed.

4:00–4:15   Closing Remarks and Reflection

DAY ONE Guiding Questions for Reflection:

Instructions: Consider the following questions for group feedback.

1. What activity was most significant for your learning today? Explain your response.

2. What concepts or activities would you like to see added to today's curriculum?

3. What event from today would you informally share with other people, whether family, friends, or colleagues?

4. Is there any area that you would wish to further investigate based on today's work?

5. Prepare a question and a response based on your specific interests or needs.

4:15 - 4:30   Evaluation Sessions 1ABCD

DAY ONE EVALUATION FORM

Instructions: Please complete the following evaluation tool for each session. Check one box per session. Specific comments will help to support improvements.

Sessions

1A   Overview of Community College Professors' Professional Development Survey (CCPPD) Survey Results and Findings

Very satisfied ( )	Satisfied ( )	Not Satisfied ( )	N/A ( )

Comments:

1B   The Role of Adult Learning Theories and Educational Research

Very satisfied ( )	Satisfied ( )	Not Satisfied ( )	N/A ( )

Comments:

1C   Presentations

Very satisfied ( )	Satisfied ( )	Not Satisfied ( )	N/A ( )

Comments:

1D   Benefits and Challenges of Collaborative Learning

Very satisfied ( )	Satisfied ( )	Not Satisfied ( )	N/A ( )

Comments:

Thank you.

DAY TWO AGENDA

Summary: Participants will examine college professional development policies and procedures including administrative perspectives and insights that will inform the development of an individualized learning plan. A planning tool with four organizational options will be reviewed and adjusted based on individual and organizational needs.

8:30–9:00   Meet/Greet

Review of Day One Feedback

Updates

9:00–10:30   **Session 2A:**

College Vision and Global Partnerships

Guest Speaker(s): Member(s) of College Executive Team

Discussion Period

2A Activity Guide

Instructions: Each guiding statement is of equal value in contributing toward the group discussion.

1. College vision is clearly defined with short-term and long-term goals.

2. Faculty is informed about proposed college innovations or possibilities that affect their responsibility and interaction with students.

3. Faculty supports are described to ensure teaching and learning success.

4. Student supports are described to ensure teaching and learning success.

10:30–10:45   Mid-morning Break

10:45–11:45   **Session 2B:**

College Professional Development Policies: Guidelines and Funding Options

Guest Speaker(s): Human Resource Staff

2B Activity Guide

Instructions: Each guiding statement is of equal value in contributing toward the group discussion.

1. College professional development policies and initiatives are described with the inclusion of timelines and scheduling.

2. Professional development funding priorities, processes, and funding amounts are transparent and aim for equity.

3. Possible changes to policies are discussed to assist with long-term planning.

11:45–12:00   2B Reflection:

Instructions: Answer at least one the following questions and submit to facilitators by the end of the day.

1. In your opinion, what was the most important information that was given in the morning sessions as related to professional development at your college?

2. What information items need more follow-up or further investigation?

3. What challenges or limitations did you draw from the sessions A & B?

12:00–1:00   Lunch Break

1:00–2:30   **Session 2C:**

Critical Components of a Professional Development Plan

Mobius Strip Metaphor and Activity (15 minutes)

Resources:

1" x 14" strips of paper (white or any color) for each participant

clear sticky tape to be shared

Instructions: Hold each end of the strip in separate hands. Give one twist to the strip, and then join the strip with tape. Notice the figure-8 form of the strip. Trace the slip of paper with your fingers starting on the outside and then ending up on the inside of the form. How would you describe the transformation of the two separate sides?

Background Information:

In Parker J. Palmer's book, *A Hidden Wholeness: The Journey Toward an Undivided Life*, Palmer demonstrates how a long thin strip of paper is twisted into a form called a Mobius strip. The Mobius strip was the discovery of August Ferdinand Mobius in 1858. Its mathematical equation is known as the Mobius transformation or bilinear transformation. Parker uses the Mobius strip to show how there seems to be no continuous inside or outside on the strip. The visual illustration captures the concept that there is only one reality in life, despite the sense of two sidedness. The metaphor reinforces the idea of shared creativity and interchanges as compared to an isolated and one-sided viewpoint. Designing a customized and quality professional development plan involves collaboration with others.

2C Metaphor Activity: Consider a metaphor, description, or image that represents how the collaboration of people moves an individual toward an important or significant goal. Be prepared to explain how your answer represents co-creation in a society that most often rewards individual achievement.

Basic Design Template of a Professional Development Plan

Instructions: Review the template below to help in identifying considerations and challenges for your decision-making. Add components that might also be needed based on your individual needs and present understanding of professional development planning. Discuss your additions or deletions with a working group. The template can be copied and adjusted for space as needed. The template can be used for each option (A, B, C, D, and E) as described below.

CUSTOMIZED PROFESSIONAL DEVELOPMENT PLAN

(your name) _____

Definitions:

short-term planning: less than a 3-semester commitment

long-term planning: more than a 3-semester commitment

formal learning: learning that offers accreditation; usually involves a significant

commitment of resources and time

informal: learning that does not offer formal accreditation; may involve reading blogs,

newsletters, short webinars, short seminars, or short-termed investigations

professional development: experiences that develop an individual's knowledge, skills,

and expertise as an educator

PD: professional development

A. SHORT-TERM INFORMAL PD PLANNING

B. SHORT-TERM FORMAL PD PLANNING

C. LONG-TERM INFORMAL PD PLANNING

D. LONG-TERM FORMAL PD PLANNING

E. Other options:

TITLE OPTION (A, B, C, D, or E)

CONSIDERATIONS & CHALLENGES	SUBJECT/DISCIPLINE EXPERTISE	TEACHING EXPERTISE
SPECIFIC GOALS *(What do I wish to improve?)*		
BENEFITS		
ALTERNATIVE GOALS OR OPTIONS		
TIMEFRAME		
TEACHING SCHEDULE		
WEEKLY FREE TIME		
MONTHLY FREE TIME		
EXPENSES		
TECHNOLOGY SUPPORTS (F2F, ONLINE)		
COLLEAGUE SUPPORTS (F2F, ONLINE)		
FAMILY/FRIENDS SUPPORTS		

CONSIDERATIONS & CHALLENGES	SUBJECT/DISCIPLINE EXPERTISE	TEACHING EXPERTISE
ORGANIZATIONAL SUPPORTS		
LIFE BALANCE		
SACRIFICES & REWARDS		
OTHER CONSIDERATIONS		

Comments:

Instructions: Here is an example to review:

D. LONG-TERM FORMAL PD PLANNING

Leslie XXXX *(fictional)*

CONSIDERATIONS & CHALLENGES	SUBJECT/DISCIPLINE EXPERTISE	TEACHING EXPERTISE
SPECIFIC GOALS (What do I wish to improve?)	*focus on completing Master's degree in English as a Second Language part-time basis*	*focus on offering more self-directed learning techniques & assignments for students; improve evaluation strategies*
BENEFITS	*enhance expertise pay raise upon completion make new friends meet experts share ideas more effective/ more satisfied*	*independent and self-directed learners are usually more empowered toward achieving success in many areas; more satisfied students; improve teaching and evaluation*
ALTERNATIVE GOALS OR OPTIONS	*Master's degree in International Studies*	*enhancing skills toward working in groups; complete in-house adult teaching certificate*
TIMEFRAME	*3– 5 years*	*2 years*
TEACHING SCHEDULE	*evening or weekend studies only; summer courses*	*try to add or focus on one technique per week; take courses as offered in-house*
WEEKLY FREE TIME	*10 hours*	*2 hours to read and plan*
MONTHLY FREE TIME	*10 x 4 wk = 40 hours summer hours increased*	*2 x 4 wk = 8 hours summers hours increased*
EXPENSES	*some college subsidy conference possibility approx. ($1000) childcare expenses; home internet costs; computer upgrades*	*conference possibility online & f2f resources; fees for webinars ($300) minimal for in-house certificate ($200); home internet costs; computer upgrades*

CONSIDERATIONS & CHALLENGES	SUBJECT/DISCIPLINE EXPERTISE	TEACHING EXPERTISE
TECHNOLOGY SUPPORTS (F2F, ONLINE)	*can access expertise as needed; will need new computer in 18-24 months*	*can access expertise as needed; upgrade software & computer*
COLLEAGUE SUPPORTS (F2F, ONLINE)	*will talk to ESL faculty of other colleges to get recommendations; study partner might be available online*	*will send messages to colleagues re: their experience and resources*
FAMILY/FRIENDS SUPPORTS	*need childcare services for some weekend afternoons*	*chat with family for occasional childcare support*
ORGANIZATIONAL SUPPORTS	*complete PD forms for continued partial support of degree; clear goals & results shared with administrators*	*ask teaching and learning center for tips, resources, and informal evaluation; some subsidy may be available; feedback to administrators*
LIFE BALANCE	*take one weekend off per month; no Friday nights for homework*	*take one weekend off per month; no Friday nights for homework*
SACRIFICES & REWARDS	*less movie time, less surfing social media; less travel for pleasure; connect with new people*	*less movie time, less surfing social media; less travel for pleasure; connect with new people*
OTHER CONSIDERATIONS	*intensive summer courses – tuition requirements*	*visit other colleges or educational institutions; interview other teachers; check out library resources*

2:30–2:45   Mid-afternoon Break

2:45–4:00   **Session 2D:**

Work on Professional Development Plan

Instructions: Using paper and pencil or computers, begin the process of working through all or some of the template options. Discuss ideas with other participants and facilitators as needed.

4:00– 4:15   2D Reflection and Closing Remarks

Instructions: Use the following questions to guide critical reflection and submit your responses to the facilitator(s).

1. Of the four optional templates, which ones most relate to your professional development needs?

2. Professional development planning is complex. How did the templates help to organize or stimulate your thinking?

3. Planning involves significant time and resources. What other resources do you need to investigate before making significant decisions about your professional development?

4. Prepare a question and a response based on your specific interests or needs.

4:15–4:30   Evaluations (Sessions 2ABCD)

DAY TWO EVALUATION FORM

Instructions: Please complete the following evaluation tool for each session. Check one

box per session. Specific comments will help to support improvements.

Sessions

2A   College Vision and Global Partnerships

Very satisfied ( )	Satisfied ( )	Not Satisfied ( )	N/A ( )

Comments:

2B   College Professional Development Policies: Guidelines and Funding Options

Very satisfied ( )	Satisfied ( )	Not Satisfied ( )	N/A ( )

Comments:

2C   Critical Components of a Professional Development Plan

Very satisfied ( )	Satisfied ( )	Not Satisfied ( )	N/A ( )

Comments:

2D   Work on Professional Development Plan

Very satisfied ( )	Satisfied ( )	Not Satisfied ( )	N/A ( )

Comments:

Thank you.

DAY THREE AGENDA

Summary: Participants will explore the role of networking, mentorship, alternative professional development resources, technology, and work/life balance. Final reflections and evaluations will be conducted.

8:30– 9:00   Meet/Greet and Updates

9:00–10:30   **Session 3A:**

Benefits and Challenges of Informal and Formal Networking

Instructions: Working within a group of three to five participants, create a table or chart and compare the effectiveness of informal and formal networks, whether face-to-face or digital, based on your individual personal and professional learning experiences.

*Use Edward de Bono's critical thinking categories of **Plus**, **Minus**, and **Interesting**. Plus represents positive concepts; Minus represents negative concepts; and for this activity, Interesting represents a global or very broad perspective. Be prepared to share your results with the larger group.*

3A Activity Evaluation Guide:

Instructions: Each guiding statement is of equal value in contributing toward the class discussion.

1. Definition of informal and formal networks are clearly defined with supporting examples.

2. All three categories (PMI) are equally represented on the chart.

3. Perspectives results include socioeconomic or educational financial realities backed with evidence.

10:30–10:45   Mid-morning Break

10:45–11:45   **Session 3B:**

Mentorship & Critical Friends

Instructions: There is a large body of research and resources about the role of mentorship in supporting educators in higher education. Today, technology and social media (e.g., Facebook, Twitter, Instagram) also play a role in developing relationships to support professional development. Working alone or with a partner, locate one or two resources of interest to you that discusses mentorship, critical friends, or relationships involving technology and briefly summarize the significant elements as related to professional development planning. Be prepared to share your opinion and notes at 1:00 in Session 3C. Each participant's oral presentation should be no longer than 6– 8 minutes.

3B Activity Evaluate Guide

1. Resource is peer reviewed and documented according with author, date, and publisher.

2. Terms used in the discussion are clearly defined.

3. Recommendations or strategies are offered to support opinions, insights, or critical reflections.

4. Participant's notes or resources will support others' learning, as requested.

12:00–1:00   Lunch Break

1:00–2:30   **Session 3C:**

Presentations on Mentorship and Professional Development

Instructions: Each participant, whether working alone or with a partner, will have 6 - 8 minutes to present relevant research and opinion as related to professional development planning. Consider the benefits and challenges.

2:30– 2:45   Mid-afternoon Break

2:45–4:00   **Session 3D:**

Work and Life Balance

Instructions: Option 1: Compose a memo or letter to yourself where you state how you will strategically balance your commitments to learning, working, and living. Option 2: Create a poster or diagram to indicate how you will strategically balance your commitments to learning, working, and living.

The following headings might help you organize your thoughts: Weekly Priorities; Rewards; Physical Health; Time with Family and Friends; Adjustments; Mental Health; Self-Evaluation. You may wish to share some of these ideas or generate new headings with participants, but that is done on a voluntary basis. It is suggested that this message or poster be retained and perhaps shared with supportive people.

Resource reading:

Gorczynski, P. (2018). More academics and students have mental health problems than ever before. THECONVERSATION.COM. Retrieved from

https://theconversation.com/more-academics-and-students-have-mental-health-problems-

than-ever-before-

4:00–4:15   3 ABCD Reflection and Closing Remarks

Instructions: Use the following questions to guide your critical thinking and submit your

responses to the facilitator(s).

1. What was the most significant learning of the day?

2. What words or actions from participants surprised me most? Explain.

3. How have your assumptions about professional development planning been

challenged?

4. Prepare a question and a response based on your specific interests or needs.

4:15–4:30   Evaluations (Sessions 3ABCD)

DAY THREE EVALUATION FORM

Instructions: Please complete the following evaluation tool for each session. Check one box per session. Specific comments will help to support improvements.

Sessions

3A   Benefits and Challenges of Informal and Formal Networking

Very satisfied ( )	Satisfied ( )	Not Satisfied ( )	N/A ( )

Comments:

3B   Mentorship & Critical Friends

Very satisfied ( )	Satisfied ( )	Not Satisfied ( )	N/A ( )

Comments:

3C   Presentations on Mentorship and Professional Development

Very satisfied ( )	Satisfied ( )	Not Satisfied ( )	N/A ( )

Comments:

3D   Work and Life Balance

Very satisfied ( )	Satisfied ( )	Not Satisfied ( )	N/A ( )

Comments:

Overall Three-Day Workshop Evaluation

Very satisfied ( )	Satisfied ( )	Not Satisfied ( )	N/A ( )

Comments:

Thank you

Resources for All Workshops

(Approximately 15 participants)

- Classroom that can accommodate a minimum of 15 participants

- Moveable tables and chairs

- Data projector, computer, and screen

- 2 Whiteboards with colored markers

- 3–4 flip chart stands & paper

- 15 colored markers

- 15 laptops with Microsoft Office and Internet access

- 15 notebooks and writing utensils

- 15 folders to hold curriculum documents, schedule listing, and evaluation forms

- additional break-out areas which may be a library, lounge, or classroom

- Optional: beverages during morning and afternoon breaks and lunch services

- Others:

References

Adichie, C. N. [TEDXEuston]. (2013, April 12). *We should all be feminists* [Video file]. Retrieved from https://www.youtube.com/watch?v=hg3umXU_qWc

[The Audiopedia]. (2017, August 23). *What is andragogy?* [Video file]. Retrieved from https://www.youtube.com/watch?v=6_aXMk4w258

Blanchard, S. [TEDxMuskegon]. (2016, November 21). *Science of mentorship* [Video file]. Retrieved from https://www.youtube.com/watch?v=hh46lVSKWHc

Bloom, N. (2015, July 6). *Conversation at home with Jack Mezirow* [Video file]. Retrieved from https://www.youtube.com/watch?v=iEuctPHsre4

Garner, C. [TEDx Darwin]. (2011, September 12). *Transforming the teacher in indigenous education* [Video file]. Retrieved from https://www.youtube.com/watch?v=bMfBeotD8gc

Gorczynski, P. (2018). More academics and students have mental health problems than ever before. *The Conversation*. Retrieved from https://theconversation.com/more-academics-and-students-have-mental-health-problems-than-ever-before-90339

Harris, J. (2014, February 24). *A brief overview of 4 learning theories* [Video file]. Retrieved from https://www.youtube.com/watch?v=ACowHxGEAUg

LaDuke, W. [TEDx]. (2012, March 4). *Seeds of our ancestors* [Video file]. Retrieved from https://www.youtube.com/watch?v=pHNlel72eQc

[Leadersin]. (2015, October 22). *Edward de Bono on the a-z of creative thinking in business* [Video file]. Retrieved from https://www.youtube.com/watch?v=Hu1WjHvwGUs

Lee, T. (2016, February 25). *Learning theories* [Video file]. Retrieved from https://www.youtube.com/watch?v=B2bsyT2S82I

Levine, E. [TED2002]. (2002, February). *A theory of everything* [Video file]. Retrieved from https://www.ted.com/talks/emily_levine_s_theory_of_everything/up-next

Palmer, P. J. (2004). *A hidden wholeness: The journey toward an undivided life*. San Francisco, CA: Jossey-Bass.

[Practical Psychology]. (2016, April 2). *8 intelligences – theory of multiple intelligence explained – Dr. Howard Gardner* [Video file]. Retrieved from https://www.youtube.com/watch?v=s2EdujrM0vA

Purefoy, D. (2009, November 7*). Howard Gardner of the multiple intelligence theory* [Video file]. Retrieved from https://www.youtube.com/watch?v=l2QtSbP4FRg

Robinson, K. [TEDTALKS]. (2006). *Do schools kill creativity?* [Video file]. Retrieved from https://www.ted.com/talks/ken_robinson_says_schools_kill_creativity/up-next?referrer=playlist-the_most_popular_talks_of_all

Siemens, G. (2014, January 21). *Overview of connectivism* [Video file]. Retrieved from https://www.youtube.com/watch?v=yx5VHpaW8sQ

Taylor, D. M. (2013, November 19). *Malcolm Knowles adult learning theory - andragogy* [Video file]. Retrieved from https://www.youtube.com/watch?v=lsvgMSGn3rY

[TEDxNYED]. (2010, April 13). *George Siemens* [Video file]. Retrieved from https://www.youtube.com/watch?v=4BH-uLO6ovI

[Wiley]. (2013, February 12). *Author Stephen Brookfield on critical thinking* [Video file]. Retrieved from https://www.youtube.com/watch?v=S4R7clM8R7A

Appendix B: Community College Professors' Professional Development Survey

(CCPPDS)

This self-administered survey is to gather information about **full-time** college professors' professional development perceptions and practices. Full-time professors are designated as holding a regular full-time bargaining unit position within your community college.

In this survey, professional development is defined as experiences that develop an individual's knowledge, skills, and expertise as an educator. Your participation is completely voluntary; you may exit at any time.

These questions are about you and your professional development experiences and thoughts. There are no right or wrong answers and your responses will be treated confidentially.

Voluntary Nature of the Study:
Your participation in this study is voluntary and confidential. Your decision of whether or not to participate will be respected and will not affect any of your workplace responsibilities. If you begin the survey, you may stop at any time. You are free to skip any questions.

Risks and Benefits of Participating in the Study:
Participation in this study may involve some minor discomfort as related to critical thinking and reflection but will not pose risk to your safety or wellbeing. All data collected will be confidential. Upon completion of the study, you and your colleagues may benefit by examining how others utilize and perceive professional development resources to support their continuous learning. Final results will be shared with you, upon request.

Payment:
There are no financial compensation or reimbursements for participating in this study.

Confidentiality:
Reports from this study will not share the identities or locations of individual participants. Identification numbers for each participant will be used to separate answers from names. No other people will have this linking information. All information you provide will be confidential and not used for any purpose outside of this research study. Data will be kept secure by the researcher with password protection and locked files. SurveyMonkey's privacy policy ensures that the data collected are not shared with anyone other than the researcher. Data will be encrypted and stored for 5 years. After 5 years, the data will be destroyed as required by Walden University.

SurveyMonkey's privacy policy ensures that the data collected are not shared with anyone other than the researcher, but it is important for you to know that SurveyMonkey is a web-survey company that is subject to the Patriot Act, which allows the US government access to records of internet service providers. No personal identifiers will be collected in this survey but it is possible that the views and opinions you expressed may be accessed and linked to you without your knowledge or consent. In an effort to maintain anonymity, during the design of this survey, the option to collect your computer IP address has been disabled. The security and privacy policy for the Survey Monkey can be found at the following link: https://www.surveymonkey.com/mp/policy/security/

Contacts and Questions:
The researcher's name is Norma-Jean Nielsen. If you have any questions about the study or if you need technological assistance to complete the survey, please contact me at _____.

1. Are you a full-time community college professor?

   Yes [ ]   No [ ]

   If respondents answer "no", they will receive the following message:
   Thank you. Based on your response, your profile does not match the target
   population for this study.

2. On a scale of 1 to 5, indicate the degree to which you support the following statements about informal or formal professional development. (Please mark one choice in each row.)

	strongly disagree (1)	disagree (2)	neutral (3)	agree (4)	strongly agree (5)
Professional development improves my teaching effectiveness.	[ ]	[ ]	[ ]	[ ]	[ ]
Professional development encourages my continuous learning.	[ ]	[ ]	[ ]	[ ]	[ ]
Professional development prepares me for a new career outside of postsecondary education.	[ ]	[ ]	[ ]	[ ]	[ ]
Professional development helps me to increase my income.	[ ]	[ ]	[ ]	[ ]	[ ]
Professional development helps me to expand my professional networks.	[ ]	[ ]	[ ]	[ ]	[ ]

3. On a scale of 1 (low importance) to 5 (high importance), please rank the importance of the following professional development options based on your present needs and interests. Each statement must have a different number value.

[ ] To further my development of digital technologies and web tools

[ ] To further my development of teaching and learning theories and methods

[ ] To further my development of subject area or trade that I am currently teaching

[ ] To further my development of new subject area or trade that I am not currently teaching

[ ] To further my development of applied or academic research skills.

4. During the past academic year, how often did you engage in informal and formal professional development activities as listed below? (*Please mark <u>one</u> choice in each row.*)

		Daily	Weekly	Monthly	3 or 4 times each year	Rarely
a)	I gave ideas and resources to colleagues at my college	[ ]	[ ]	[ ]	[ ]	[ ]
b)	I received ideas and resources from my colleagues at my college.	[ ]	[ ]	[ ]	[ ]	[ ]
c)	I gained ideas and resources from interactions with students.	[ ]	[ ]	[ ]	[ ]	[ ]
d)	I utilized online technologies and resources for learning and teaching.	[ ]	[ ]	[ ]	[ ]	[ ]
e)	I participated in face-to-face workshops and events involving colleagues from other community colleges (Colleges Ontario).	[ ]	[ ]	[ ]	[ ]	[ ]
f)	I participated in online workshops and events involving colleagues from other community colleges (Colleges Ontario).	[ ]	[ ]	[ ]	[ ]	[ ]
g)	I gained ideas and resources from socializing with family and friends.	[ ]	[ ]	[ ]	[ ]	[ ]

5. With a focus on your teaching and learning needs in a continuously changing postsecondary environment, please identify resources that would significantly influence and support long-term planning regarding your professional development. (Briefly explain your response.)

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6. On a scale of 1 to 5, indicate the degree to which you support the following statements. *(Please mark one choice in each row.)*

	strongly disagree (1)	disagree (2)	neutral (3)	agree (4)	strongly agree (5)
I benefit from collaborative learning with colleagues from other disciplines.	[ ]	[ ]	[ ]	[ ]	[ ]
Online resources and networks are a critical component for my professional development.	[ ]	[ ]	[ ]	[ ]	[ ]
Face-to-face conversations with colleagues are a critical component of my professional development.	[ ]	[ ]	[ ]	[ ]	[ ]
Noncredit courses are just as important as credit courses for my professional development.	[ ]	[ ]	[ ]	[ ]	[ ]
I believe my professional development is a joint responsibility with my college.	[ ]	[ ]	[ ]	[ ]	[ ]
I believe my professional development is a personal responsibility.	[ ]	[ ]	[ ]	[ ]	[ ]
Overall, I am satisfied with my level of engagement regarding professional development.	[ ]	[ ]	[ ]	[ ]	[ ]

7. How many years have you been working full-time at your <u>present </u>community college (including your probationary time)? *Please mark one choice.*

[ ]   0–4
[ ]   5– 9
[ ]   10–14
[ ]   15–19
[ ]   20–24
[ ]   25–29
[ ]   30+

8. What is your age group?

[ ]   19 and under
[ ]   20–29
[ ]   30–39
[ ]   40–49
[ ]   50–59
[ ]   60–69
[ ]   70+

9. How do you identify your gender?

Female [ ]   Male [ ]

Thank you for sharing your thoughts and expertise.

SURVEY COMPLETE – SUBMIT

Appendix C: National Health Institutions Certificate

Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Norma-Jean Nielsen** successfully completed the NIH Web-based training course "Protecting Human Research Participants".
Date of completion: 12/08/2014
Certification Number: 1632950

Appendix D: Tri-Council Policy Certificate

PANEL ON
RESEARCH ETHICS
Navigating the ethics of human research

TCPS 2: CORE

Certificate of Completion

This document certifies that

Norma-Jean Nielsen

has completed the Tri-Council Policy Statement:
Ethical Conduct for Research Involving Humans
Course on Research Ethics (TCPS 2: CORE)

Date of Issue: **15 July, 2016**

Appendix E: Instrument Evaluation Form (Pilot Study)

Please evaluate each item on the survey instrument. It is critical that the survey is relevant and user-friendly. A well-designed survey contributes to reliability and validity of results.

1.   Importance Rating

Question Numbers	1	2	3	4	5	6	7	8	9
High importance									
Moderate importance									
Low importance									
No importance									

2.   If you have any suggestion regarding any item or items in particular, please comment.

_____

_____

_____

_____

3.   If you have any suggestions regarding the formatting or delivery mode of the survey, please comment.

_____

_____

_____

_____

Thank you for your assistance. Please return this form to Norma-Jean Nielsen at _____ if you have additional questions.