LIVED EXPERIENCE: LEARNING THROUGH HIGH SCHOOL CO-OPERATIVE EDUCATION

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Thesis submitted to the University of Ottawa
in partial Fulfillment of the requirements for the
Master's of Arts (Education)

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Abstract

Co-operative education in which senior high school students are placed in supervised workplace settings and gain credits towards a graduation diploma is the type of work-based education offered in Ontario. The purpose of this retrospective qualitative research was to examine how students learn in co-operative education placements and to explore the environmental conditions that facilitate student learning and motivation. The conceptual framework guiding this research consisted of three theories: Billet's (2014) theory of mimesis, Munby et al.'s (2003) theory of metacognitive routines, and Snyder's (2000) hope theory. Three former high school students who had been in automotive co-operative education placements participated in semi-structured interviews that followed a modified version of Seidman's (2019) three interview technique. While the findings did not support Munby et al.'s (2003) ideas about routines, they corroborated the use of mimesis as a means of workplace learning (Billet, 2014) and Snyder's (2000) writings about work and motivation. In this study, a successful placement involved three factors: social belonging and active learning and the reciprocal relationship between them, as well as the hope that was ignited, which crystalized the academic and career goals the students set for themselves. Moreover, workplace conditions that fostered a sense of social belonging and co-workers who provided informal instruction on technical and interpersonal skills contributed the most to the participants' learning in their co-op placements. Implications for schools and co-operative education teachers are discussed.

Keywords: work-based education, co-operative education, co-workers, social belonging, motivation

Acknowledgement

First and foremost, I would like to thank Dr. Cheryll Duquette, my first supervisor, who guided me through this process. Without your help, I would not have been able to conduct this quality of research. I am so grateful for your time, patience, and mentorship.

Thank you to my second supervisor, Dr. Jess Whitley. You pushed me to make this a better submission, and I appreciate your candor and rigour.

Thank you to my committee members, Dr. Ruth Kane and Dr. Raymond Leblanc, for your time and thoughtful feedback.

Thank you to my participants who not only took the time to speak with me, but who also spoke openly and with great detail about their experiences.

Finally, thank you to my husband, Jordan, who supported me through this whole process like a true partner. Your love and support mean the world to me.

Preface

The following is a thesis by article. The first section is organized like a monograph, with an expanded literature review and methodology, which includes both description and reflection. The article describes the findings, discussion, implications, future research, and conclusions. Following the article is a reflection that considers both research and teaching implications.

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Co-operative education combines classroom learning with workplace experience and is offered to students in high school and postsecondary institutions. In Ontario high schools, this form of learning is offered to students in grades 11 and 12 to gain credits for their grade 12 diploma (Ontario Ministry of Education, 2018). It is a unique opportunity for students to learn about future employment and acquire experience in the workforce (Ontario Ministry of Education, 2018). It provides them with an experience that is unlike the previous 10+ years of their schooling (Munby et al., 2009). At a time when students are being streamed into workplace, college, or university pathways at the age of 13 and 14 years old, co-operative education offers a course designed to engage students of all abilities and interests. Unlike other classes that rely on the teacher to release autonomy, co-operative education is inherently choice-driven (Ontario Ministry of Education, 2018). Due to co-operative education's potential to improve outcomes for students, it is of particular interest for educational researchers (Blustein et al. 2000; Hutchinson et al., 2011; Kenny et al., 2010; Munby et al., 2003).

Engaging youth in the trades through apprenticeships has been a recent focus in Canadian education. A large part of encouraging students to think about apprenticeable trades as a career option is changing common misconceptions (e.g., that the trades are a back-up plan or lesser than university pursuits). The Ontario 2018 Co-operative Education curriculum encourages teachers to promote the Ontario Youth Apprenticeship Program (OYAP) - a program that enables students to begin the process of completing their Level 1 apprenticeship training. The program also helps students identify pathways to apprenticeships. Historically, there has been pushback from parents, students, and educators regarding appropriate pathway planning, as many believe that to have a stable and fulfilling career, high school graduates must attend university (Lehman et al., 2014; Remery and Merele, 2014; Taylor & Freeman, 2011). Regardless of student

motivation or educational pathway, co-op has potential for students to learn about workplace expectations, gain skills, and develop self-awareness. With this context in mind, it is of value to examine the conditions (e.g., the training available, skills learned, tasks required, and people involved) that influence a positive or negative trade-related co-operative education placement to ensure a successful co-op experience (Stewart & Kerr, 2010).

Existing literature has identified the importance of the teacher/supervisor relationship (Scholl & Mooney, 2003) and how learning occurs in the workplace (Billett, 2014), but little is known about co-workers and their role in developing a relationship with the co-op students and providing informal instruction. Therefore, this research was designed to examine how students learn in co-operative education placements and to explore the environmental conditions, including co-workers, that facilitate student learning and motivation. The three research questions for this thesis by article were: How do students learn in the workplace? How is learning linked to their feelings of hope motivation while at work? How do environmental conditions, specifically co-workers, influence a student's experience of co-operative education?

Researcher Statement

The researcher is a co-operative education teacher who is passionate about the role of WBE as an intervention tool as well as the potential that co-op holds to disrupt preconceived notions about pathway planning. Some of the primary responsibilities of a co-op teacher include: fostering relationships with community members, preparing students for the workplace, and monitoring students in their placements. Therefore, the researcher brings a practical knowledge and understanding of the program requirements and protocols involved with WBE. Interviewing is relational and the social forces (such as race, gender, and class) of the researcher and participants influence the relationship (Seidman, 2019). The previous context in which the

researcher and participants knew each other also impacted the findings. While experience in the field of WBE provides valuable insight to the study, it can also serve as a liability. In an attempt to reduce this bias, the researcher engaged in constant dialogue with academic supervisors and committed to on-going self-reflection.

Literature Review

The review of the literature consists of four main sections. The first section provides a general overview of the concept of work-based learning (WBL) and synthesizes various work conducted on formal "School-to-Work" programs. The subsequent three sections, motivation, supportive adults, and learning, focus on findings and theories that have been developed through researching WBL.

Work-Based Learning

Work-Based Education (WBE) refers to the programs that facilitate learning for high school students and young adults in supervised work placements (Bailey et al. 2004; DeLuca et al., 2015). "School-to-Work" is an umbrella term used to describe a variety of initiatives that involve job-shadowing, job twinning, internships, work experience, and formal co-operative education credit courses (Hughes et al., 2001; Versnel et al., 2011). Throughout the United States, there have been various formal "School-to-Work" programs that have been studied extensively, including Wisconsin's "Youth Apprenticeship Program" (YAP), California's "Career and Technical Education" (CTE) program, and the National Organization for Disabilities' "Start on Success" (SOS) program (Blustein et al., 2000; Dykzeul, 2017; Fitzgerald et al., 2016; Josten, 2015; Sabbatino & Macrine, 2007; Scholl & Mooney, 2003; Thorn et al., 1997). These studies, along with research conducted in Canada, have indicated similar general outcomes for students, including: high probability of on-time graduation (Dykzeul, 2017;

Fitzgerald et al., 2016; Hughes et al., 2001), increased self-confidence (Hughes et al., 2001; Hutchinson et al., 2001), career clarification and planning (Bennett, 2007; Dykzeul, 2017; Hutchinson et al., 2001; Scholl & Smyth, 2000), and development of new workplace skills (DeLuca et al., 2015; Dykzeul, 2017; Thorn et al., 1997).

Motivation and Hope

Findings on student motivation to enroll in WBE have varied. For example, Gaunt (2005) focused on human influence and found that friends and family had the greatest impact on a student's decision to enroll in a work-based program. Gaunt's line of questioning excluded other factors that Josten (2015) examined, such as career training for future employment, which emerged as the most common reason why his participants chose WBE. Through a comprehensive literature review, DeLuca et al., (2015) found that family, friends, school expectations, and community resources all played a role in influencing a student's enrolment and completion of WBE. Conversely, in specialized programs for students with disabilities, like SOS, students were selected by staff based on interest, need and employability (Sabbatino & Macrine, 2007).

WBE has successfully been used as an intervention tool for at-risk students (Blustein et al., 2000; DeLuca et al., 2015; De Velasco et al., 2016; Kenny et al., 2010; Sanders et al., 2020; Taylor et al., 2015). While this success in students' persistence manifests in the workplace, the effects can permeate many aspects of a student's life (Fitzgerald et al., 2016; Hughes et al., 2001). Snyder (2000) conceptualized hope theory as an individual having both the agency and the pathways to achieve their goals. Many studies have used Snyder's (2000) framework to examine WBE and the ways that hope intersects with outcomes (Drysdale & McBeath, 2014; Goh, 2014; Kenny et al., 2010). Juntunen and Wettersten (2006) used Snyder's (2000) hope

theory as a theoretical basis to develop a Work Hope Scale (WHS), designed to explain the factors that influence a person's work behaviours. Critical to facilitating hope is a supportive work environment in which individual and collective goals are simultaneously realized (Snyder 2000). WBE supports this type of environment, where the student (novice) is learning through doing, both gaining skills and contributing to the overall goal (Billett, 2014). The independence, autonomy and purpose which WBE facilitates has given students the ability to see the pathways to reaching their goals (e.g., high school graduation, career aspirations), and ultimately resulted in a greater sense of motivation (Kenny et al., 2010; Taylor et al., 2015; Valero et al., 2015).

Within the Canadian context, Kenny et al. (2010) and Taylor et al. (2015) provided findings to better understand Work Hope in action. Kenny et al. (2010) used quantitative research methods to survey 201 grade 9-12 students in a workplace program to identify school-based factors that promote success for marginalized students. Using Juntunen and Wettersten's (2006) Work Hope Scale (WHS) in conjunction with three other scales, Kenny et al. (2010) found that as they had expected, there was a relationship between student self-perception and the support and autonomy experienced. Additionally, work hope appeared to correlate to school motivation for low-income students. Responding to Juntunen and Wettersten's (2006) call for researchers to use hope theory to understand the work-related concerns and motivational factors of disenfranchised youth, Taylor et al. (2015) conducted a qualitative study on the influence of work-based education (WBE) on seven recently re-engaged grade 11 and 12 students. Taylor et al. (2015) found that when students felt more hopeful about their future, the impact manifested in greater engagement with both school and work. Both Kenny et al. (2010) and Taylor et al. (2015) concluded that WBE was an effective intervention tool for disengaged students.

Supportive Adults

The role that relationships (between students and their family, teachers, and placement supervisors) play in supporting or hindering students in their placements has been extensively studied (Blustein et al., 2000; DeLuca, 2015; Gaunt, 2005; Hughes et al., 2001; Hutchinson et al., 2011; Phillips et al., 2001; Sabbatino & Macrine, 2007; Sanders et al., 2020; Scholl & Mooney, 2003; Versnel et al., 2008). Parental support of the placement, including their guidance in career planning, has been linked to program completion and successful transitions from school to work (Blustein et al., 2000; Phillips et al., 2001). Blustein et al. (2000) interviewed 20 participants who had recently made the transition from school to work and focused on the role of social class. The findings indicated that parental involvement (including encouragement, knowledge of post-secondary programs, and understanding of career planning) was connected to socio-economic status and an important factor in determining a successful transition. Phillips et al. (2001) conducted a qualitative study with 17 participants and found that students who demonstrated "job-readiness" reported considerable support from their parents. Parental support in both studies correlated positively to success in WBE.

In examining the role of WBE teachers working with students with disabilities, Scholl and Mooney (2003) and Versnel et al. (2008) criticized teacher participants for their lack of communication with workplace supervisors. Scholl and Mooney (2003) conducted in-depth interviews over the course of six years to evaluate the experiences of participants in Wisconsin's "Youth Apprenticeship Program" (YAP). Through a "framework of resilience" the authors examined the ability of high school students with learning disabilities to complete the program and transition successfully to the world of work. Similarly, Versnel et al. (2008) examined the role of WBE as an intervention tool in the cases of two at-risk students with disabilities. Both

studies identified a greater need for the teacher to intervene on behalf of the student to implement suitable accommodations. However, the importance of this mediation on the part of the teacher is not universally recognized. In their study, Hutchinson et al. (2006) examined the experiences of two students with disabilities, one physical, and the other developmental. The placement supervisors were aware of the student's disabilities and had agreed to make the appropriate accommodations. In contrast to the findings of Scholl and Mooney (2003) and Versnel et al. (2008), Hutchinson et al. (2006) found that there was value in the students (rather than teachers) communicating with their supervisors to implement relevant and specialized accommodations in the workplace.

Experiences with supervisors, both positive (Chin et al., 2004) and negative (Savoie-Zajc & Dolbec, 2003) have been explored. Chin et al (2004) examined the experience of one student in a dental office and using Hung's (1999) theory of epistemological appropriation was able to identify the ways in which the supervisor created an effective learning environment. In contrast, Savoie-Zajc and Dolbec (2003) observed a pulp and paper vocational program in Quebec, Canada. In this case, students were not seen as contributing members to the workplace, corporate interests imbued supervisor conduct, and values such as seniority over education resulted in poor student integration into the workplace. Both studies found that students benefited from scaffolded opportunities to learn technical skills, as well as patient and empathetic supervisors. More generally, the benefits of a "supportive adult" in a youth's life, whether that be a family member, teacher, or workplace supervisor, have been connected to student success (including successful completion the WBE program, high school graduation, and/or a successful transition from school to work) (DeLuca et al., 2015; Hughes et al., 2001; Hutchinson et al., 2011; Kenny et al., 2010; Sabbatino & Macrine, 2007; Sanders et al., 2020; Scholl & Mooney, 2003; Versnel

et al., 2008). Many of the actors within the placement experience have been studied; however, there is limited research on the effect that co-workers have on a student's WBE.

Learning

While WBE placements are conducted in a variety of workplaces, (e.g., veterinary clinics, construction sites, bakeries, grocery stores, real estate offices, airports, etc.) the workplace in general has been deemed an effective environment in which to learn (Aarkrog, 2005; Billett, 2014; Kenny et al., 2016; Musset, 2019). Through WBE students can acquire work-related skills from adults who care about their work and their profession (Hughes et al., 2001; Kenny et al., 2016; Schaap et al., 2012). In preparation for the workplace, students receive classroom training on communication skills, problem solving, and safety (Hughes et al., 2001; Hutchinson et al., 2011). However, school and the workplace are two separate learning environments and how students go about transferring their knowledge between the two is a complicated process (Eraut, 2003; Griffiths & Guile, 2003; Munby et al., 2009; Schaap et al., 2012).

At the high school level, WBE in Canada is conducted primarily through co-operative education, a credit based course for grades 11 and 12 students. The Ontario curriculum requires teachers to formally link student learning to a course they have either taken or are concurrently enrolled in during their co-op education course because it is expected that students transfer knowledge and skills from school to the new workplace context (Ontario Ministry of Education, 2018). The ability for students to transfer knowledge from one context (school) to another (the workplace) has been brought under question (Aarkrog, 2005; Billett, 2014; Daley, 1999; Eraut, 2003; Griffiths & Guile, 2003; Munby et al., 2009; Rogers-Chapman & Darling-Hammond, 2013). Billett (2014) argued that within "schooled societies" top-down training has taken on too

much weight. He called upon human resource development practitioners to consider the impact of his theory of mimesis at work, which posits that learning occurs not through formal training, but through daily interactions at work. Through mimesis, the novices' learning does not occur in an isolated environment (like a training room or classroom), but in the workplace through observation, imitation, and action (Billett, 2014). This process is similar to Hung's (1999) theory of epistemological appropriation, in which the novice submits to the mentor, mirrors their actions, and then independently takes action. Like Billett (2014), Munby et al. (2009) identified the ways in which school (training) and work are different, and the implications that those differences have on transferability. In their metacognitive theory of routines, Munby et al. (2003) hypothesized that: "(1) work can be conceptualized as routines and (2) the concept of routines can be taught" (p. 95). In their theorizing, Billett (2014), Hung (1999), and Munby et al., (2003) all referenced Vygotsky (1978) and the social nature of learning.

Metacognitive theory of routines (2003) was conceptualized in opposition to the widely accepted use of teaching "generalizable workplace skills" within Ontario high schools. Munby et al. (2003) questioned the transferability of workplace skills taught in school. Using this theory, Versnel et al. (2008) focused their study on students with learning disabilities. Unlike Scholl and Mooney (2003) and Carter et al. (2009) they did not involve other students to permit a comparison. Instead, they conducted a qualitative study, in which the two cases of Laurie and Jerry were independently analyzed and subsequently cross-referenced. While Jerry was quite comfortable working on cars, and Laurie new to the trade, neither experienced success in their placements. In addition to their criticism of the co-op teacher, Versnel et al. (2008) identified the absence of explicit instruction in the workplace as the issue, arguing that routines could have

been, and should have been explicitly taught by the supervisors, and that this would have given each student a structure from which to develop.

Munby et al. (2007) continued to explore the idea of metacognition through a case study analysis of three co-op students in different placements. The authors developed "instructional pages" on workplace concepts like routines, belonging, and next steps and asked the teachers to explicitly teach the concepts during pre-placement. The authors interviewed the teachers, students, and employers throughout the experience and determined that while the teachers had agreed to use the instructional pages, the students were unfamiliar with the content. Through the five interviews conducted with each participant, the researchers were able to familiarize the students with the instructional pages, and students were able to reflect on their experiences. Unlike Versnel et al. (2008) who speculated that routines would have worked had they been implemented, Munby et al. (2007) had more substantial findings, with students and employers responding positively to the metacognitive resources that their team developed. The findings revealed that students could identify a routine in their workplace but overall the study did not show how the routines, or thinking about the routines, impacted student learning. Therefore, the efficacy of Munby's (2003) theory of routines remains in question.

Both Billett (2014) and Munby et al. (2007) were concerned with the transfer knowledge gap that occurs between formal training/classroom tasks and the workplace. In response to this phenomenon, Munby et al. (2007) argued for the intentional implementation of metacognition (specifically in regard to understanding routines), while Billett (2014) maintained that in order for mimesis to be effective, the novice must use active cognition to understand higher order processes. While these concepts are similar, (in that they both require the learner to be active in the learning process), one discrepancy between Munby et al. (2007), and Billett (2014) appears

to be in their audience. Billett (2014) recognized that as a form of interdependent learning, mimesis is a process with which learners of all ages can engage; however regardless of age, this framework requires a motivated novice, wanting to learn and asking questions. In addition, Billett's (2002) previous work on reciprocity acknowledged the need for the novice to be an eager learner in order to take advantage of enriching opportunities in the workplace. Munby et al. (2007) studied youth who were struggling in their workplaces and required intervention, and Billett (2014) does not address how mimesis could be implemented with a disengaged learner. The omission of struggling learners brings into question the transferability of Billett's (2014) theory of mimesis to WBE at the high school level.

Summary

The benefits of WBE, the reasons why students enroll in WBE, and the experiences of students in American WBE programs have been studied extensively (Bennett, 2007; Blustein et al., 2000; DeLuca et al., 2015; De Velasco et al., 2016; Dykzeul, 2017; Fitzgerald et al., 2016; Hughes et al., 2001; Hutchinson et al., 2001; Josten, 2015; Sabbatino & Macrine, 2007; Sanders et al., 2020; Scholl & Mooney, 2003; Taylor et al., 2015; Thorn et al., 1997). Several researchers have also attempted to understand the relationship between work, hope, and motivation (Juntunen & Wettersten, 2006; Kenny et al., 2010; Taylor et al., 2015; Valero et al., 2015). There is great potential that supportive adult relationships can contribute to the success of WBE (DeLuca et al., 2015; Hughes et al., 2001; Hutchinson et al., 2011; Kenny et al., 2010; Sabbatino & Macrine, 2007; Sanders et al., 2020; Scholl & Mooney, 2003; Versnel et al., 2008). Additionally, what is learned and how learning occurs in the workplace have been theorized about in different ways (Billet, 2014; Hung, 1999; Munby et al., 2003). The role of supervisors

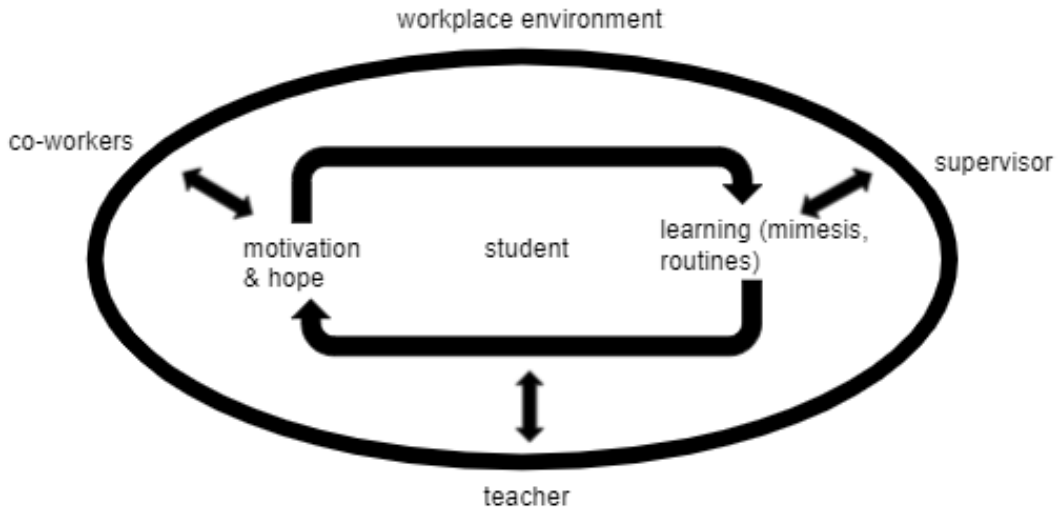
and teachers have been examined, whereas co-workers, in terms of creating a supportive environment and engaging the student in the learning process, have been under-explored.

Conceptual Framework

This research examined the elements that motivate and influence student learning throughout their OYAP co-operative education placement. The purpose of this study was to investigate how students learn in co-operative education placements and the conditions that facilitate student learning and motivation. Figure 1 illustrates how the three elements of the research questions, motivation, learning, and environment, interact.

Figure 1

Conceptual Framework



The research has shown that when students are motivated, they learn more and that learning also increases motivation (Kenny, et al., 2010; Munby et al., 2003). As well, people in the workplace environment, particularly the supervisor and co-workers can affect learning and motivation (Billett, 2014; Scholl & Mooney, 2003; Versnel et al., 2008). The model in Figure 1 shows the main components: the student and the workplace, the student and hope/motivation, and the student and learning. There is interaction between the three human components: student,

teacher, and those in the workplace which affect student feelings of hope and motivation, and also learning within the workplace. Within the context of co-operative education, the roles of the supervisor and teacher have both been studied exhaustively (Bennett, 2007; Bonati & Dymond 2019; Scholl & Mooney, 2003; Versnel et al., 2008); however, the role of co-workers has garnered much less attention. That is why co-workers take an independent place in the model. Table 1 shows how the three research questions were based in the theories related to co-operative education.

Table 1

Research Questions Connected to Theories

Research question	Theory
1. How do students learn in the workplace?	Metacognitive theory of routines (Munby et al., 2003)
2. How do environmental conditions, specifically co-workers, influence a student's experience of co-operative education?	Theory of mimesis at work (Billett, 2014)
3. How is learning linked to student feelings of hope and motivation while at work?	Hope theory (Snyder, 2000)

Context

In Ontario, co-operative education is offered as a grade 11 and 12 high school credit course. It is grounded in experiential learning and offers students the opportunity to earn credits while completing a work placement. This course is customarily offered as two credits and scheduled together, so that students can spend an entire morning or afternoon at a placement.

The placement and learning experiences are typically related to one or more courses that the student has already taken at school. A variety of employers within a community are requested by high school teachers to mentor students (e.g., retail, trades, and hospitals). Co-operative education is taken for several reasons, including but not limited to: career exploration, part-time work (students who are hoping to be employed after their co-op position ends), and students who need a change from their regular courses. Through co-op, students are given the opportunity to experience hands-on learning, cultivate a sense of community, clarify work and educational goals, network, and develop workplace skills. The placement process begins months before the course, as the teacher must organize the placement with the employer. At the beginning of the course, students typically spend a week in "pre-placement", which focuses on workplace skills, safety, legislation, policies, etiquette, and CV writing. This portion of the course is meant to provide students with the tools they need to participate in the community, as they will spend the majority of their course in a work placement (Ontario Ministry of Education, 2018). After pre-placement, students begin working at their respective workplaces. Supervisors are responsible for providing appropriate training and learning opportunities for students. The co-op teacher assesses and monitors the student's placement throughout the semester. To determine a final grade for the course, the teacher considers the student's pre-placement work and the supervisor's assessment of the placement performance.

Methodology

This research followed a qualitative approach in which interviews were used to understand youth perspectives on the conditions that influenced their learning in co-operative education placements (Merriam & Tisdell, 2016). In contrast to a positivist approach, in which researchers are concerned with finding generalizations, a qualitative design was more appropriate

for this study which sought to explore the lived experiences of students within their co-operative education placements (Mertens, 2010). The researcher was the primary instrument of data collection (Merriam & Tisdell, 2016) and entered into an "I-Thou" relationship, in which the participants were close to but still separate. This was a relationship in which the researcher viewed the participants as human, not object, and yet still separate (Seidman, 2019). This resulted in a rapport between researcher and participant, but the focus remained on the participant.

The investigation was designed to understand the meaning for those involved, rather than generalizations beyond its scope (Stake, 2000). It was a retrospective study, in which participants were separated by one or two years from the experience. This had both positive and negative implications. The separation participants had from events allowed them time to reflect on the effects of their WBE. Conversely, the time gap between the events and interviews may have impacted the application of particular learning theories, as students were unable to recall specific details that could explain their experiences.

Recruitment

Selection of study participants was purposeful (Patton, 1990, 2002), in that individuals who had experienced the phenomenon under study (LeCompte, Preissle, & Tesch, 1995) and who could potentially provide rich information (Bloomberg & Volpe, 2008) were recruited. In this case, the criterion used was that the participants had been involved in a co-operative education program offered by an Ontario high school within the last two years.

Students were recruited using a database of 14 of my former students, currently between the ages of 18 and 19 years, who were previously placed in the automotive sector while they were co-operative education students. Students were contacted by email to ascertain interest and

availability to participate in the research. While candidates were to be accepted on a first come first serve basis, only three replied and agreed to take part. To protect anonymity, participant names have been changed to pseudonyms and identifying details have been altered or removed.

Participants

Brandon, Keira, and Brooklyn (pseudonyms) participated in 60-to-90-minute interviews. The data collected has been synthesized into profiles presented below that convey the context within which the participants experienced co-operative education.

Brandon

Brandon attended one elementary school and a single high school from which he graduated in 2020. His memories of school were very positive, and he had the same group of friends from Kindergarten, referring to them as "friends for life." Brandon enjoyed taking hands-on classes in high school, including three construction classes, two manufacturing classes, and two transportation classes. Identified with a learning disability and started on an Individualized Education Plan (IEP) in grade 3, he felt supported and fondly remembered his high school resource teacher. His mother and twin sister were very involved in his life, and took prominent roles in his course selection, including his decision to take co-operative education. Brandon was interested in welding and had requested a welding placement. Due to multiple students being interested in the same welding shop, he instead went to a small, family owned car dealership, which both sold cars and did repairs. Brandon worked on the garage side, fixing and maintaining vehicles. At the end of his co-op placement, he was offered a part-time position with the dealership which was his first job. Brandon is currently completing a college welding program.

Keira

Graduating in 2019, Keira went to three different elementary schools and two different high schools. She described her transition to a new school in grade 6 as particularly challenging and found it difficult to maintain friendships. Unlike Brandon, Keira did not enjoy school. Her highlights from high school were the Achievement Centre, where she was able to earn credits while working independently, and her co-operative education course. In high school, Keira was admitted to a local children's hospital for depression and anxiety. Although she produced a doctor's note at school outlining appropriate accommodations, they were not implemented by her teachers, and she received no academic support. Throughout high school, Keira worked part-time at five different restaurants, sometimes working at two establishments concurrently. Money was a concern, as Keira longed to buy her own car and had unstable living accommodations, staying with her parents, different friends, and her uncle at points throughout high school. Keira did not enjoy school and considered dropping out. She credits her co-operative education course for keeping her in school. Even though Keira did not take any automotive courses in school, she requested a placement in a small mechanic shop. She worked at that placement for seven weeks before requesting to move placements to the restaurant where she was employed at the time. After graduating, Keira continued to work at a restaurant and completed two university Indigenous studies courses as a special student. She is now starting her own home cleaning business.

Brooklyn

Brooklyn graduated from high school in 2020 and like Brandon, she attended one elementary school and one high school. She enjoyed elementary school but found it hard to make and maintain friendships in high school. Her parents separated when Brooklyn was eight years

old, and they shared custody for a time. Things changed after a couple of years when Brooklyn's father emerged as more of a disciplinarian, leading Brooklyn to live exclusively with her mother. Her issues with authority crossed over into other aspects of her life. In grade 10, Brooklyn got her first part-time job at a major retail store; however, she was fired from that job due to a dispute with her manager. She was subsequently hired by a physiotherapy clinic, where she worked as a receptionist until COVID-19 reduced her hours. Like Keira, Brooklyn considered dropping out of high school and saw co-op as "the best of both worlds", an opportunity to get out of the building while earning credits. Brooklyn's brother had taken co-op at an auto body shop, and his interests greatly influenced hers. She completed three co-operative education placements in her grade 11 and 12 years. Her first placement was at a major dealership, working with a mechanic, while the second two placements were at a locally owned auto detailing shop. Since graduating, Brooklyn obtained permanent employment at a major dealership, working in office administration, and her goal is to work in car sales.

Data Collection

An interview protocol based on Seidman's (2019) three interview strategy was developed. Seidman's (2019) technique is designed to gather information that will provide an "understanding of the lived experiences of other people and the meaning they make of that experience" (p. 9). Seidman's three interview technique consists of interviews using a semi-structured protocol, each lasting between 60 and 90 minutes. The feasibility of conducting three separate interviews with the three participants became problematic. There was great difficulty in recruiting the three participants and in finding a time that would work in each individual's schedule. As a result, the questions that had been written for three different interviews were consolidated into one longer interview.

The first section of the interview established the context, frame of mind, experiences, and dispositions with which the participants entered the co-operative education course. Participants were asked to describe their childhoods, relationships with parents and peers, and experience with school. Sample questions included: “Do you have any positive or negative memories of high school?” and “Did you have trouble making friends or keeping friends?” In addition to contextualizing the participants’ co-operative education experiences within their personal histories, the focus of the first interview also reinforced Gergen’s (1999, 2009) social constructionism theory, which stresses the power of narrative for self-constructing identity. Beginning the data collection process with an emphasis on relationship building allowed the dialogue between researcher and participant to generate a new domain of shared meaning (Gergen, 2009).

The second part of the interview asked participants to reconstruct their experiences and to reflect on their work-based learning. van Manen (2016) referred to the process of reflecting on lived experience as “discovering the extraordinary in the reconstruction of the ordinary” (p. 298). Questions were about the common, everyday events that participants may not have yet reflected upon; for example: “Did you observe anyone while you were learning the routines of the workplace?” Seidman (2019) emphasized the benefits of asking participants to reconstruct their experiences, asking not for opinions, but instead the details of the experience. Creating space for participants to discuss their interactions with others in the workplace was crucial to the focus on the influence of co-workers.

While only one interview per participant was conducted, breaks were incorporated so that the participants could take their time, and so that the interviewer could guide the reflection in the third and final phase of the interview. In their examination of discussions around mental health,

Bailey et al. (2017) emphasized the importance of the acronym TALK (Tell, Ask, Listen, and KeepSafe). Depending on the interview, all four components can be equally important. Entering the third phase of the interview, "tell" became a particularly useful tool. The details of participants' answers were recapitulated back to the contributor which resulted in establishing a shared understanding. This strategy worked to remind participants of what they said before, confirm the retelling of their story is accurate, and ensured there was a shared understanding of their experience. The final phase of the interview was the most challenging, as it required participants to ask themselves what their co-operative education experience meant to them (Seidman, 2019); questions included: "Through the co-op experience, was there anything you learned about yourself that was positive or negative?" While the three participants were relatively young (between the ages of 18 and 19), all three were able to make meaningful connections and insightful reflections on their co-operative education experiences.

Keira's and Brandon's interviews were conducted over the phone, while Brooklyn's was conducted over Google Meet. The audio was digitally recorded, and each interview was approximately 90 minutes. Verbatim transcripts were produced and sent to each participant to provide an opportunity to make changes to their responses to ensure that the words accurately expressed their thoughts (Guest et al., 2012; Mero-Jaffe, 2011). There were no revisions to the transcripts.

Data Analysis

Merriam and Tisdell (2016) implored researchers to understand their interview biases and urged them to be critical and systematic observers. The authors also emphasized self-reflection: in questioning what is observed or speculated during the research process, the researcher is able to consolidate ideas and perceptions and begin their initial data analysis. The first step in the

analysis process was to read and re-read the transcripts. Passages identified as “meaningful” (Miles & Huberman, 1994) or “interesting” (Seidman, 2019) were highlighted. Subsequently, notes were added in the margins, the text was marked with codes, a table was constructed with participants’ responses to aid in the comparison, and codes merged into categories (Merriam and Tisdell, 2016). Erickson (2018) called coding qualitative data a “slippery slope” and cautioned researchers to avoid “premature typification and premature closure in the analysis process” (p. 56). This attentiveness was integrated into the data analysis process to honour participants’ voices and avoid eliminating pertinent data. Through careful coding and categorizing, themes emerged that allowed an understanding of participants’ lived experiences (Miles et al., 2014). Yin (2009) explained that coding cannot address the “how” and “why” questions that ignited a researcher’s interest in the first place and consequently, a great deal of work was undertaken after coding to address the root of the three research questions. Finally, the second author analysed the data independently to provide an inter-rater reliability check (Miles & Huberman, 1994). The analyses were compared, and they were consistent.

Trustworthiness

The two indicators of trustworthiness that were used in this research were credibility and transferability. Credibility is concerned with the intersection of participant experience and the way in which the researcher presents that perspective (Mertens, 2010). Guba and Lincoln (1989) view member checks as the most important means of establishing the credibility of the data. In this study, the transcripts were emailed to each participant. This transparency allowed participants to correct, add, or redact information before interpretations were developed, thereby ensuring that the data accurately represented their thoughts. Credibility was also enhanced through the independent analyses of the data by two of the authors. Transferability is the extent

to which findings can be applied to other situations (Mertens, 2010). It was achieved by providing a careful and thorough description of the context and the experiences of the participants, permitting the readers to apply the ideas to their own situations.

Reflections on the Review of the Literature and the Methodology

The literature review began with a general search in the university's library portal. The initial search using "co-operative education" yielded poor results and kept the focus on Canadian studies, mainly research conducted in Ontario. Internationally, co-operative education is perceived more generally as cooperative learning, a process in which group work and collaboration are employed in the classroom. With guidance, the research terms expanded using search terms like "work-based education", "workplace learning", and "school to work transition". This not only increased the number of studies in the search results, but also yielded more diverse results from a variety of countries. After an initial read through, articles were placed in a summary table that included the headings: title, methodology, participants, location, and outcome. Using the table as an organization tool allowed for easy comparisons, and also the ability to see emerging themes in the literature. When themes were established, another table was created using the themes as headings, which aided in the writing process.

The process of obtaining ethical approval was more than simply a bureaucratic exercise. It guided integrity in knowledge production and established a responsibility to participants (O'Leary, 2017). The main concern for ethical consideration was the power dynamic between the researcher and proposed pool of participants. Seidman (2019) implored researchers to acknowledge the power dynamics between interviewer and participants. In this study, this unequal relationship was exacerbated by the previous student-teacher relationship between participants and researcher. The matter was made transparent, the thesis committee was

conferred on the issue, and ultimately it was determined by the Research Ethics Board that it was an acceptable situation. Striving to establish a more equitable relationship during the interviews, participants were asked how they would like to be addressed, scheduled ending times were respected, genuine interest was shown to their stories, and participants were reminded that they could pass on a question if desired (Seidman, 2019).

Recruitment was a two-month process. The contact information used to reach out to possible participants was submitted by students one to three years previous, and many email addresses were no longer active. Initially, participants were contacted using their old high school email addresses. Three students answered, including Keira and Brooklyn, who were the only two female students in the database. Another former student responded and agreed to participate but became busy and no mutually agreeable time for an interview was established. Interviews were organized and conducted with Keira and Brooklyn. In the next round of emails, parent emails (which had been supplied by the students) were used. Brandon's mother responded, asking for more details, and provided Brandon's new email address. Brandon agreed to the conditions of the study, and his interview was conducted within the week.

Verbatim transcripts were produced and sent to each participant to provide an opportunity to make changes to their responses to ensure that the words accurately expressed their thoughts. There were no revisions to the transcripts. Similar to the literature review process, a table was organized with the interview responses and used to identify similarities, differences and potential themes. The comparison table was printed and annotated with comments such as "need for escape, dislike for school, low expectations, desire for independence, anxiety, sense of accomplishment." The document was colour coded to establish categories. The second author analysed the data independently to provide an inter-rater reliability check (Miles & Huberman,

1994) and then met with the first author. There were many similarities between the two analyses, and it was at that time that the themes from the data were established. The findings were then compared and contrasted to existing literature with particular focus on the three theories in the conceptual framework. Conducting and analyzing the interviews were the most enjoyable and stimulating experiences during the thesis writing process.

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"Someone invested in me": Learning Through High School Co-operative Education

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We have no conflicts of interest to disclose.

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Abstract

Co-operative education in which senior high school students are placed in supervised workplace settings and gain credits towards a graduation diploma is the type of work-based education offered in Ontario. The purpose of this retrospective qualitative research was to examine how students learn in co-operative education placements and to explore the environmental conditions that facilitate student learning and motivation. The conceptual framework guiding this research consisted of three theories: Billet's (2014) theory of mimesis, Munby et al.'s (2003) theory of metacognitive routines, and Snyder's (2000) hope theory. Three former high school students who had been in automotive co-operative education placements participated in semi-structured interviews that followed a modified version of Seidman's (2019) three interview technique. While the findings did not support Munby et al.'s (2003) ideas about routines, they corroborated the use of mimesis as a means of workplace learning (Billet, 2014) and Snyder's (2000) writings about work and motivation. In this study, a successful placement involved three factors: social belonging and active learning and the reciprocal relationship between them, as well as the hope that was ignited, which crystalized the academic and career goals the students set for themselves. Moreover, workplace conditions that fostered a sense of social belonging and co-workers who provided informal instruction on technical and interpersonal skills contributed the most to the participants' learning in their co-op placements. Implications for schools and co-operative education teachers are discussed.

Keywords: work-based education, co-operative education, co-workers, social belonging, motivation

Co-operative education combines classroom learning with workplace experience. In Ontario, this form of learning is offered to students in grades 11 and 12 to gain credits for their grade 12 diploma (Ontario Ministry of Education, 2018). It is a unique opportunity for students to learn about future employment and acquire experience in the workforce (Ontario Ministry of Education, 2018). It provides them with an experience that is unlike the previous 10+ years of their schooling (Munby et al., 2009). At a time when students are being streamed into workplace, college, or university pathways at the age of 13 and 14 years old, co-operative education offers a course designed to engage students of all abilities and interests. Unlike other classes that rely on the teacher to release autonomy, co-operative education is inherently choice-driven (Ontario Ministry of Education, 2018). Due to co-operative education's potential to improve outcomes for students, it is of particular interest for educational researchers (Hutchinson, 2008; Munby et al., 2003).

Engaging youth in the trades through apprenticeships has been a recent focus in Canadian education. A large part of encouraging students to think about apprenticeable trades as a career option is changing common misconceptions (e.g., that the trades are a back-up plan or lesser than university pursuits). The Ontario 2018 Co-operative Education curriculum encourages teachers to promote the Ontario Youth Apprenticeship Program (OYAP)—a program that enables students to begin the process of completing their Level 1 apprenticeship training. The program also helps students identify pathways to apprenticeships. Historically, there has been pushback from parents, students, and educators regarding appropriate pathway planning, as many believe that to have a stable and fulfilling career, high school graduates must attend university (Lehman et al., 2014; Remery and Merele, 2014; Taylor & Freeman, 2011). Regardless of student motivation or educational pathway, co-op has potential for students to learn about workplace

expectations, gain skills, and develop self-awareness. With this context in mind, it is of value to examine the conditions (e.g., the training available, skills learned, tasks required, and people involved) that influence a positive or negative trade-related co-operative education placement to ensure a successful co-op experience (Stewart & Kerr, 2010).

Existing literature has identified the importance of the teacher/supervisor relationship (Scholl & Mooney, 2003) and how learning occurs in the workplace (Billett, 2014), but little is known about co-workers and their role in developing a relationship with the co-op students and providing informal instruction. Therefore, this research was designed to examine how students learn in co-operative education placements and to explore the environmental conditions, including co-workers, that facilitate student learning and motivation. The three research questions were: How do students learn in the workplace? How is learning linked to their feelings of hope and motivation while at work? How do environmental conditions, specifically co-workers, influence a student's experience of co-operative education?

Literature Review

Work-Based Learning

Work-Based Education (WBE) refers to the programs that facilitate learning for high school students and young adults in supervised work placements (Bailey et al. 2004; DeLuca et al., 2015). "School-to-Work" is an umbrella term used to describe a variety of activities that help students transition from school into the workplace. These initiatives often involve job-shadowing, job twinning, internships, work experience, and formal co-operative education credit courses (Hughes et al., 2001; Versnel et al., 2011). Throughout the United States, there have been various formal "School-to-Work" programs that have been studied extensively, including Wisconsin's "Youth Apprenticeship Program" (YAP), California's "Career and Technical

Education" (CTE) program, and the National Organization for Disabilities' "Start on Success" (SOS) program (Blustein et al., 2000; Dykzeul, 2017; Fitzgerald et al., 2016; Josten, 2015; Lanford & Tierney, 2015; Sabbatino & Macrine, 2007; Scholl & Mooney, 2003; Thorn et al., 1997). These studies, along with research conducted in Canada, have indicated similar general outcomes for students, including: high probability of on-time graduation (Dykzeul, 2017; Fitzgerald et al., 2016; Hughes et al., 2001), increased self-confidence (Hughes et al., 2001; Hutchinson et al., 2001), career clarification and planning (Bennett, 2007; Dykzeul, 2017; Hutchinson et al., 2001; Scholl & Smyth, 2000), and development of new workplace skills (DeLuca et al., 2015; Dykzeul, 2017; Thorn et al., 1997).

Motivation and Hope

Findings on **s**tudent motivation to enroll in WBE have varied. For example, Gaunt (2005) focused on human influence and found that friends and family had the greatest impact on a student's decision to enroll in a work-based program. Gaunt's line of questioning excluded other factors that Josten (2015) examined, such as career training for future employment, which emerged as the most common reason why his participants chose WBE. Through a comprehensive literature review, DeLuca et al. (2015) found that family, friends, school expectations, and community resources all played a role in influencing a student's enrolment and completion of WBE. Conversely, in specialized programs for students with disabilities, like SOS, students were selected by staff based on interest, need and employability (Sabbatino & Macrine, 2007).

WBE has successfully been used as an intervention tool for at-risk students (Blustein et al., 2000; DeLuca et al., 2015; De Velasco et al., 2016; Kenny et al., 2010; Sanders et al., 2020; Taylor et al., 2015). While this success in students' persistence manifests in the workplace, the

effects can permeate many aspects of a student's life (Fitzgerald et al., 2016; Hughes et al., 2001). Snyder (2000) conceptualized hope theory as an individual having both the agency and the pathways to achieve their goals. Juntunen and Wettersten (2006) used Snyder's (2000) hope theory as a theoretical basis to develop a Work Hope Scale (WHS), designed to explain the factors that influence a person's work behaviours. Critical to facilitating hope is a supportive work environment in which individual and collective goals are simultaneously realized (Snyder 2000). WBE supports this type of environment, where the student (novice) is learning through doing, both gaining skills and contributing to the overall goal (Billett, 2014). The independence, autonomy and purpose which WBE facilitates has given students the ability to see the pathways to reaching their goals (eg., high school graduation, career aspirations), and ultimately resulted in a greater sense of motivation (Kenny et al., 2010; Taylor et al., 2015; Valero et al., 2015).

Supportive Adults

The role that relationships (between students and their family, teachers, and placement supervisors) play in supporting or hindering students in their placements has been extensively studied (Blustein et al. 2000; DeLuca et al., 2015; Gaunt, 2005; Hughes et al., 2001; Hutchinson et al., 2011; Phillips et al., 2001; Sabbatino & Macrine, 2007; Sanders et al., 2020; Scholl & Mooney, 2003; Versnel et al., 2008). Parental support of the placement, including their guidance in career planning, has been linked to program completion and successful transitions from school to work (Blustein et al. 2000; Phillips et al., 2001). In examining the role of WBE teachers working with students with disabilities, Scholl and Mooney (2003) and Versnel et al. (2008) criticized teacher participants for their lack of communication with workplace supervisors. Both studies identified a greater need for the teacher to intervene on behalf of the student to implement suitable accommodations. However, the importance of this intervention on the part of the teacher

is not universally recognized. Hutchinson et al. (2006) argued for the value of students with disabilities communicating with their supervisors to implement appropriate accommodations in the workplace. Experiences with supervisors, both positive (Chin et al., 2004) and negative (Savoie-Zajc & Dolbec, 2003) have been explored. Both studies found that students benefited from scaffolded opportunities to learn technical skills, as well as patient, and empathetic supervisors. More generally, the benefits of a "supportive adult" in a youth's life, whether that be a family member, teacher, or workplace supervisor, have been connected to student success (including successful completion the WBE program, high school graduation, and/or a successful transition from school to work) (DeLuca et al., 2015; Hughes et al., 2001; Hutchinson et al., 2011; Kenny et al., 2010; Sabbatino & Macrine, 2007; Sanders et al., 2020; Scholl & Mooney, 2003; Versnel et al., 2008). Many of the actors within the placement experience have been studied; however, there is limited research on the effect that co-workers have on a student's WBE.

Learning

While WBE placements are conducted in a variety of workplaces, (e.g., veterinary clinics, construction sites, bakeries, grocery stores, real estate offices, airports, etc.) the workplace in general has been deemed an effective environment in which to learn (Aarkrog, 2005; Billett, 2014; Kenny et al., 2016; Musset, 2019). Through WBE students are able to acquire work-related skills from adults who care about their work and their profession (Hughes et al., 2001; Kenny et al., 2016; Schaap et al., 2012). In preparation for the workplace, students receive classroom training on communication skills, problem solving, and safety (Hughes et al., 2001; Hutchinson et al., 2011). However, school and the workplace are two separate learning environments and how students go about transferring their knowledge between the two is a

complicated process (Eraut, 2003; Griffiths & Guile, 2003; Munby et al., 2009; Schaap et al., 2012).

At the high school level, WBE in Canada is conducted primarily through co-operative education, a credit-based course for grades 11 and 12 students. The Ontario curriculum requires teachers to formally link student learning to a course they have either taken or are concurrently enrolled in during their co-op education course because it is expected that students transfer knowledge and skills from school to the new workplace context (Ontario Ministry of Education, 2018). The ability for students to transfer knowledge from one context (school) to another (the workplace) has been brought under question (Aarkrog, 2005; Billett, 2014; Daley, 1999; Eraut, 2003; Griffiths & Guile, 2003; Hung, 1999; Rogers-Chapman & Darling-Hammond, 2013). Billett (2014) argued that within "schooled societies" top-down training has taken on too much weight. He called upon human resource development practitioners to consider the impact of his theory of mimesis at work, which posits that learning occurs not through formal training, but through daily interactions at work. Through mimesis, the novices' learning does not occur in an isolated environment (like a training room or classroom), but in the workplace through observation, imitation, and action (Billett, 2014). This process is similar to Hung's (1999) theory of epistemological appropriation, in which the novice submits, mirrors the necessary tasks, and then independently takes action. Hung (1999) also addressed transferability, arguing that learning is context dependent and also socially driven. Like Billett (2014), Munby et al. (2009) identified the ways in which school (training) and work are different, and the implications that those differences have on transferability. In their metacognitive theory of routines, Munby et al. (2003) hypothesized that: "(1) work can be conceptualized as routines and (2) the concept of

routines can be taught" (p. 95). In their theorizing, Billett (2014), Hung (1999), and Munby et al., (2003) all referenced Vygotsky (1978) and the social nature of learning.

Summary

The benefits of WBE, the reasons why students enroll in WBE, and the experiences of students in American WBE programs have been studied extensively (Bennett, 2007; Blustein et al., 2000; DeLuca et al., 2015; De Velasco et al., 2016; Dykzeul, 2017; Fitzgerald et al., 2016; Hughes et al., 2001; Hutchinson et al., 2001; Josten, 2015; Sabbatino & Macrine, 2007; Sanders et al., 2020; Scholl & Mooney, 2003; Taylor et al., 2015; Thorn et al., 1997). Several researchers have also attempted to understand the relationship between work, hope, and motivation (Juntunen & Wettersten, 2006; Kenny et al., 2010; Taylor et al., 2015; Valero et al., 2015). There is great potential that supportive adult relationships can contribute to the success of WBE (DeLuca et al., 2015; Hughes et al., 2001; Hutchinson et al., 2011; Kenny et al., 2010; Sabbatino & Macrine, 2007; Sanders et al., 2020; Scholl & Mooney, 2003; Versnel et al., 2008). Additionally, what is learned and how learning occurs in the workplace have been theorized about in different ways (Billet, 2014; Hung, 1999; Munby et al., 2003) There is currently a gap in the literature regarding both the experiences of students in Ontario who do not have disabilities and those who have unidentified disabilities. Additionally, the role of co-workers in creating a supportive environment and engaging the student in the learning process, has been under-explored.

Conceptual Framework

This research examined the elements that motivate and influence student learning throughout their OYAP co-operative education placement. The purpose of this study was to investigate how students learn in co-operative education placements and the conditions that

facilitate student learning and motivation. Figure 1 illustrates how the three elements of the research questions, motivation, learning, and environment, interact.

Place Figure 1 about here.

The research has shown that when students are motivated, they learn more and that learning also increases motivation (Kenny, et al., 2010; Munby et al., 2003). As well, people in the workplace environment, particularly the supervisor and co-workers can affect learning and motivation (Billett, 2014; Scholl & Mooney, 2003; Versnel et al., 2008). The model in Figure 1 shows the main components: the student and the workplace, the student and motivation, and the student and learning. There is interaction between the three human components: student, teacher, and those in the workplace which affect student motivation and learning within the workplace. Within the context of co-operative education, the roles of the supervisor and teacher have both been studied exhaustively (Bennett, 2007; Bonati & Dymond 2019; Scholl & Mooney, 2003; Versnel et al., 2008); however, the role of co-workers has garnered much less attention. That is why co-workers take an independent place in the model. Table 1 shows how the three research questions were based in the theories related to co-operative education.

Place Table 1 about here

Context

In Ontario, co-operative education is a grade 11 and 12 high school credit course. It is grounded in experiential learning and offers students the opportunity to earn credits while completing a work placement. It is customarily offered as two credits and scheduled together, so that students can spend an entire morning or afternoon at a placement. The placement and learning experiences are typically related to one or more courses that the student has already taken at school. A variety of employers within a community are requested by high school

teachers to mentor students (e.g., retail, automotive trades, and hospitals). Co-operative education is taken for several reasons, including but not limited to: career exploration, part-time work (students who are hoping to be employed after their co-op position ends), and students who need a change from their regular courses. Through co-op, students are given the opportunity to experience hands-on learning, cultivate a sense of community, clarify work and educational goals, network, and develop workplace skills. The placement process begins months before the course, as the teacher must organize the placement with the employer. At the beginning of the course, students typically spend a week in "pre-placement", which focuses on workplace skills, safety, legislation, policies, etiquette, and CV writing. This portion of the course is meant to provide students with the tools they need to participate in the community, as they will spend the majority of their course in a work placement (Ontario Ministry of Education, 2018). After pre-placement, students begin working at their respective workplaces. The co-op teacher monitors the student's placement throughout the semester to verify safety, ensure accommodations are in place, and facilitate reflection.

Methodology

This research followed a qualitative approach in which interviews were used to understand youth perspectives on the conditions that influenced their learning in co-operative education placements (Merriam & Tisdell, 2016). The investigation was designed to understand the meaning for those involved, rather than generalizations beyond its scope (Stake, 2000). It was a retrospective study, in which participants were separated by one or two years from the experience. This had both positive and negative implications. The separation participants had from events allowed them time to reflect on the effects of their WBE. Conversely, the time gap

between the events and interviews may have impacted the application of particular learning theories, as students were unable to recall specific details that could explain their experiences.

Recruitment

Selection of study participants was purposeful (Patton, 1990, 2002) in that individuals who had experienced the phenomenon under study (LeCompte, Preissle, & Tesch, 1995) and who could potentially provide rich information (Bloomberg & Volpe, 2008) were recruited. In this case, the criterion used was that the participants had been involved in a co-operative education program offered by an Ontario high school within the last two years.

Students were recruited using a database of 14 of the first author's former students, currently between the ages of 18 and 19 years, who were formerly placed in the automotive sector while they were co-operative education students. Students were contacted by email to ascertain interest and availability to participate in the research. While candidates were to be accepted on a first come first serve basis, only three replied and agreed to take part. To protect anonymity, participant names have been changed to pseudonyms and identifying details have been altered or removed.

Participants

Brandon, Keira, and Brooklyn (pseudonyms) participated in 60-to-90 minute interviews. The data collected has been synthesized into profiles presented below that convey the context within which the participants experienced co-operative education.

Brandon

Brandon attended one elementary school and a single high school from which he graduated in 2020. His memories of school were very positive, and he had the same group of friends from Kindergarten, referring to them as "friends for life." Brandon enjoyed taking hands-

on classes in high school, including three construction classes, two manufacturing classes, and two transportation classes. Identified with a learning disability and started on an Individualized Education Plan (IEP) in grade 3, he felt supported and fondly remembered his high school resource teacher. His mother and twin sister were very involved in his life, and took prominent roles in his course selection, including his decision to take co-operative education. Brandon was interested in welding and had requested a welding placement. Due to multiple students being interested in the same welding shop, he instead went to a small, family-owned car dealership, which both sold cars and did repairs. Brandon worked on the garage side, fixing and maintaining vehicles. At the end of his co-op placement, he was offered a part-time position with the dealership which was his first job. Brandon is currently completing a college welding program.

Keira

Graduating in 2019, Keira went to three different elementary schools and two different high schools. She described her transition to a new school in grade 6 as particularly challenging and found it difficult to maintain friendships. Unlike Brandon, Keira did not enjoy school. Her highlights from high school were the Achievement Centre, where she was able to earn credits while working independently, and her co-operative education course. In high school, Keira was admitted to a local children's hospital for depression and anxiety. Although she produced a doctor's note at school outlining appropriate accommodations, they were not implemented by her teachers, and she received no academic support. Throughout high school, Keira worked part-time at five different restaurants, sometimes working at two establishments concurrently. Money was a concern, as Keira longed to buy her own car and had unstable living accommodations, staying with her parents, different friends, and her uncle at points throughout high school. Keira did not enjoy school, and considered dropping out. She credits her co-operative education course for

keeping her in school. Even though Keira did not take any automotive courses in school, she requested a placement in a small mechanic shop. She worked at that placement for seven weeks before requesting to move placements to the restaurant where she was employed at the time. After graduating, Keira continued to work at a restaurant and completed two university Indigenous studies courses as a special student. She is now starting her own home cleaning business.

Brooklyn

Brooklyn graduated from high school in 2020 and like Brandon, she attended one elementary school and one high school. She enjoyed elementary school but found it hard to make and maintain friendships in high school. Her parents separated when Brooklyn was eight years old, and they shared custody for a time. Things changed after a couple of years when Brooklyn's father emerged as more of a disciplinarian, leading Brooklyn to live exclusively with her mother. Her issues with authority crossed over into other aspects of her life. In grade 10, Brooklyn got her first part-time job at a major retail store; however, she was fired from that job due to a dispute with her manager. She was subsequently hired by a physiotherapy clinic, where she worked as a receptionist until COVID-19 reduced her hours. Like Keira, Brooklyn considered dropping out of high school and saw co-op as "the best of both worlds", an opportunity to get out of the building while earning credits. Brooklyn's brother had taken co-op at an auto body shop, and his interests greatly influenced hers. She completed three co-operative education placements in her grade 11 and 12 years. Her first placement was at a major dealership, working with a mechanic, while the second two placements were at a locally owned auto detailing shop. Since graduating, Brooklyn obtained permanent employment at a major dealership, working in office administration, and her goal is to work in car sales.

Data Collection

An interview protocol based on Seidman's (2019) three interview strategy was developed. Seidman's (2019) technique is designed to gather information that will provide an "understanding of the lived experiences of other people and the meaning they make of that experience" (p. 9). Seidman's three interview technique consists of interviews using a semi-structured protocol, each lasting between 60 and 90 minutes. The feasibility of conducting three separate interviews with the three participants became problematic. There was great difficulty in recruiting the three participants and in finding a time that would work in each individual's schedule. As a result, the questions that had been written for three different interviews were consolidated into one longer interview.

The first section of the interview established the context, frame of mind, experiences, and dispositions with which the participants entered the co-operative education course. Participants were asked to describe their childhoods, relationships with parents and peers, and experience with school. Sample questions included: "Do you have any positive or negative memories of high school?" and "Did you have trouble making friends or keeping friends?" The second part of the interview asked participants to reconstruct their experiences and to reflect on their work-based learning. Questions were about the common, everyday events that participants may not have yet reflected upon; for example: "Did you observe anyone while you were learning the routines of the workplace?" The third section required participants to ask themselves what their co-operative education experience meant to them; for example: "Through the co-op experience, was there anything you learned about yourself that was positive or negative?" While all three participants were relatively young (between the ages of 18 and 19), all three were able to make meaningful connections and insightful reflections on their co-operative education experiences.

Throughout the interviews, breaks were incorporated so that the participants could take their time, and so that the interviewer could guide the reflection in the final phase of the interview. The interviews were conducted over Google meet or the phone, and the audio was digitally recorded. Each interview was approximately 90 minutes. Verbatim transcripts were produced and sent to each participant to provide an opportunity to make changes to their responses to ensure that the words accurately expressed their thoughts (Guest et al., 2012; Mero-Jaffe, 2011). There were no revisions to the transcripts.

Data Analysis

The first step in the analysis process was to read and re-read the transcripts. Passages identified as "meaningful" (Miles & Huberman, 1994) or "interesting" (Seidman, 2019) were highlighted. Subsequently, notes were added in the margins, text was marked with codes, a table was constructed with participants' responses to aid in the comparison, and codes merged into categories (Merriam and Tisdell, 2016). Through coding and categorizing, themes emerged that allowed an understanding of participants' lived experiences (Miles et al., 2014). The second author analysed the data independently to provide an inter-rater reliability check (Miles & Huberman, 1994). The analyses were compared, and they were consistent.

Trustworthiness

The two indicators of trustworthiness that were used in this research were credibility and transferability. Credibility is concerned with the intersection of participant experience and the way in which the researcher presents that perspective (Mertens, 2010). Guba and Lincoln (1989) view member checks as the most important means of establishing the credibility of the data. In this study, the transcripts were emailed to each participant. This transparency allowed participants to correct, add, or redact information before

interpretations were developed, thereby ensuring that the data accurately represented their thoughts. Credibility was also enhanced through the independent analyses of the data by two of the authors. Transferability is the extent to which findings can be applied to other situations (Mertens, 2010). It was achieved by providing a careful and thorough description of the context and the experiences of the participants, permitting the readers to apply the ideas to their own situations.

Findings

The three interviews were analyzed individually and then compared independently by the first and second authors. The data are organized into four themes: motivation, the workplace induction process, fewer rules and more autonomy, and transition to adulthood.

Motivation

Motivation emerged as a major theme in all three interviews and will be broken down into four subcategories: motivation to choose co-op, motivation to accept a co-op placement in the automotive industry, motivation to attend their placement, and motivation to graduate from high school.

Motivation to Choose Co-op

Brandon initially thought he would not register for co-op, but his mother and sister strongly encouraged him to take the course. They saw it as a way for Brandon to gain work experience in the trades. Brooklyn was influenced by her family as well. Her older brother had taken co-op and Brooklyn understood the independence that came with the course. She was also struggling in school at the time:

> I definitely chose to take co-op because I could not stay at school. I was like ‘this is my out’. Especially because I didn’t have as many friends at school, I wasn’t into the whole

> school thing. So co-op was the best of both worlds. I get to get out of this place, and still be doing high school.

Likewise, Keira was not doing well in school and was contemplating dropping out: "I didn't have the greatest experience of school so co-op kind of allowed me to find a loophole, almost. It didn't feel like I was going to school because that environment wasn't the easiest thing for me." For both Brooklyn and Keira, co-op was a way to earn credits that did not involve academics and that was separate from the social scene at school.

Motivation to Accept a Placement in the Automotive Sector

Brandon had a career path chosen in grade 11 and knew that he wanted to pursue an apprenticeship in welding. He requested a co-op placement at a welding shop; however, the co-op teacher was only able to secure one welding placement and a student with more experience was given that opportunity. Brandon's second choice was to work at a mechanic shop, and he willingly accepted a placement at a locally owned car garage close to his home. Brooklyn was close with her older brother, and his interest in cars influenced Brooklyn's course selection and career planning. A placement in a dealership and a high-end auto parts shop were consistent with her career goals. By contrast, Keira requested an auto placement on a whim. She liked the idea of doing a co-op placement in a non-traditional area and she thought that working with mechanics was not something most girls would consider doing.

Motivation to Attend their Placement

Push Factor.

Throughout high school, Brooklyn and Keira both encountered personal and academic obstacles, but their placements bolstered their resolve to earn credits. Keira explained that

> Before I started doing co-op, I was not doing well with school. I was considering just not

> doing it any more. I was struggling to go to school every day. And then co-op really allowed me to get what I needed to get done… and I kind of saw the light at the end of the tunnel of high school. And that helped me to plow through it so that I could do what I actually wanted to do.

Similarly, Brooklyn saw co-op as an alternative means to achieve her aims, "I mean the best part for me was the escape. Just because I had no desire to be at school whatsoever. So being able to run away for a while sort of thing was great." These feelings are evidenced by Brooklyn's choice to take co-op in three of her last four semesters in high school. Both Keira and Brooklyn realized that attendance at their co-op placements would be necessary to earn credits, but they needed an "escape" from school. They benefited from the alternative setting and expectations at their placements. Co-op provided the girls with hope, "the light at the end", and this motivated them to show up, both physically and mentally.

Pull Factor.

Unlike Keira and Brooklyn, Brandon had a positive experience at high school, he had friends and discovered courses that interested him. Regardless, Brandon preferred to be at his placement than to take electives at school. Even though Keira did not complete her entire semester at the auto shop, all three students had positive experiences at their placements. When asked why they chose to go co-op as opposed to skipping, both Brandon and Brooklyn cited the personnel at their placements as their reason to attend. Brandon explained that "the great bond" he had with the mechanics compelled him to show up at the auto shop. Similarly, Brooklyn was incentivized to go to co-op because "knowing there was someone invested in me made me feel I have to go for that." The connections that the employers made with Brandon and Brooklyn were powerful engagement tools. Keira on the other hand did not identify her co-workers as her main

reason for attending, although she did explain that co-op felt different compared to the "high school drama" she had previously been experiencing. The absence of tension and conflict at co-op was refreshing to her. Additionally, Keira felt that being recognized for her hard work at co-op helped her to "step up" and mature. While Brooklyn and Keira were both pushed to take co-op, all three students were pulled to it.

Motivation to Graduate High School

While Brandon was well supported by his friends, family, and the school, Keira and Brooklyn were not. They struggled to make and maintain friendships, had a complicated relationship with one or both of their parents, and did not benefit from additional support at school. Both girls disclosed that they had contemplated dropping out of high school. Brooklyn felt that college or university were not pathways that she was interested in pursuing. In reflecting on her co-op experience, Brooklyn explained that "getting to experience [co-op] and knowing I'm really so into this definitely motivated me to get it all done and help me get to that point for myself." Uninterested in postsecondary education, Brooklyn was struggling to find a reason to finish high school. With career clarification, co-op motivated Brooklyn to earn her diploma. Keira also struggled to see the purpose of high school, but unlike Brooklyn, co-op did not provide Keira with a better understanding of her future career. Co-op did expose Keira to the possibilities of the workplace, and as Keira explained, "Even though co-op might not have made me more interested in the other classes I was taking at that time, it definitely encouraged me to get them done so that I could do something that I wanted to do." Working in a space with more like-minded people exposed Keira to life outside of high school and provided her with a new perspective. Beyond being motivated to attend co-op, their work experiences also pushed Keira and Brooklyn to complete their credit requirements for a high school diploma.

The Workplace Induction Process

The three students described a very similar orientation and training process in their placements. Students were explicitly taught a select few things, but most of their learning was through observation and shadowing their co-workers, followed by hands-on opportunities. In addition, Brandon mentioned receiving feedback on the tasks that he completed and incorporating it into his work. As a result of his high school auto courses, Brandon brought a procedural knowledge and enjoyed the most autonomy. When integrating into the workplace Brandon explained that

> For a couple of days, I really just watched to see how they did things, how efficient they were… [later] they would let me go off… and do an oil change on my own, but for bigger jobs, where you need a license to do it, I would help them, but I couldn't do it solely by myself.

When asked how he learned about interacting with customers, Brandon explained that he was never explicitly told what to do or say, but that he modelled his behaviour off of the other employees in the shop. Like Brandon, Brooklyn had also gained industry knowledge through an auto class at school. At her placement, she was paired with Don, the lead technician at the dealership, and worked exclusively with him. For Brooklyn, she reflected that "it mattered on the severity of the job whether I was observing or actually working. And if it was something that I could only observe, [Don] was super great at explaining it all, not just moving on to the next step, but showing me why we're doing that and why that happens." Keira did not have any prior knowledge but experienced a similar process: "I would just shadow them each day… it was a lot of watching other people do things. They would do something, and then say 'now, here, you try.' They would involve me in what they were doing." Regardless of prior knowledge, the students

experienced a similar cycle of observation and supervised attempts. The students all worked beside an employee who ensured that valuable experience was safely gained.

Brandon and Keira had very similar experiences with the personnel at their placements. The garages were small, locally owned with only a handful of employees. Neither Brandon nor Keira worked with one mechanic in particular. Instead, Brandon worked with whoever needed help while Keira chose which mechanic to shadow based on the task that interested her the most. Like Keira, Brooklyn was anxious about her first day. This nervousness dissolved for both students though when they met their supervisors. Brooklyn's supervisor had years of experience working with high school co-op students. Don developed a very meaningful mentor-relationship with Brooklyn. All three students had very positive reflections and spoke of the staff welcoming them into the space and social milieu. In explaining his initiation into the workplace, Brandon used words such as "friendly" and "welcoming" and explained that one of the mechanics eventually became his best friend. Brooklyn spoke of Don being "invested" in her and "connecting and bringing" her into the learning. She also met new people who she "connected with a lot better" than her peers at school. Similarly, Keira echoed Brooklyn's sentiment in her interview, commenting on the personnel: "I felt a lot more like minded and close with the people that I was learning from [at work] instead of when I was in school… For me, being around people who were older and have that knowledge has helped me grow as a person." She explained that the shop was "a great environment" to learn and that "the people were really supportive, and very friendly." All three students were welcomed and described feelings of belonging.

Fewer Rules and More Autonomy

Keira found high school difficult, particularly the rules around attendance and being on-time. In discussing her experience of school, Keira expressed that she felt school was meant for

"one kind of person... somebody who has a very stable home life and somebody who has the ability to put all of their attention on school. And to not really have any outside problems." As an adult, looking back on her experience of school, Keira was able to identify the ways in which school hurt her and did not work for her. In discussing her issues with attendance, Keira stated that "co-op felt like I could not go to school, but still be getting a credit for that. I always felt good going because I felt like I had found a compromise." When asked about attendance and lateness at the shop, and whether the expectations around behaviour were the same at school and the shop, Keira explained that "it was easier at the shop in that sense. Because there wasn't the need to be as prim and proper. But in other ways, like arriving on time, and being responsible and listening, those were all needed for sure." While Keira found school stifling, she was able to thrive in a work environment. The difference between the shop expectations and school regulations came down to the way in which Keira was treated. When conflict at the shop arose, such as Keira arriving late, she was spoken to right away and given constructive criticism, feedback that Keira called "super helpful". Keira felt that the people made a big difference for her: "I kind of butted heads with most of the teachers and I didn't really like the other students around me. So that maybe clouded school for me." The respect that Keira was given and the way in which she was treated as a peer as opposed to a subordinate gave Keira a sense of belonging and also reduced her feelings of defiance.

For Keira and Brooklyn, school became increasingly difficult in their final years of high school. They struggled to fulfill the institutional expectations and were not enjoying their time in class. In addition to escaping the monotony of high school, both Keira and Brooklyn saw real value in what they were doing at their placements. Multiple times throughout her interview,

Brooklyn referred to the differences between courses at school and co-op. Brooklyn enjoyed co-op and felt that she had a purpose at work:

> It was nice being able to go and knowing that I'm going to work. I'm not sitting in a classroom. I'm going to do something, which to me, felt very useful. Whereas school wasn't useful, I didn't see the point in it, so to know I was going somewhere where I was going to make a difference, like fix a car, I know I was going to do something, not just school work.

Brooklyn felt that her time spent at co-op was "useful" compared to school. The real-world implications at co-op engaged Brooklyn and allowed her to immediately apply her knowledge. Likewise, Keira found independence at work: "I enjoyed balancing the tires, because that was something that I could do by myself, and I felt a sense of accomplishment." Putting her newly learned skills into practice made Keira feel proud and gave her a sense of job satisfaction. Both Brooklyn and Keira felt autonomy over their work as they experienced self-determination unlike anything that had encountered before.

In describing her home life and experiences at her part-time job, a pattern of conflict with authority emerged. Reflecting on her adolescence, Brooklyn was able to track how her relationship to those in positions of power changed as she matured. While Brooklyn did not have any major issues with authority at school, she knew that "school was just not for me." Co-op provided Brooklyn with the opportunity to change her routine and try something new: "I needed to get out. I just needed the opportunity to get out. I just needed my own space to kind of be independent, and mature a bit." In comparing school to her co-op placement, Brooklyn felt that "you don't have the authority on your back as much in the workplace, because they would hope you're self-sufficient by then." Co-op provided Brooklyn with a place to mature and gain

independence in an environment that felt less oppressive.

Brandon had been punished for doing some "stupid stuff" in elementary school, but he did not describe any issues around discipline in high school. In comparing the expectations at school to his co-op placement, Brandon felt that there was much more leniency at the shop: "They're not going to complain to you when you get in there for being a little late. When you show up, you show up. If you missed a day, as long as you told them, which I did… they're very chilled when it comes to that stuff. So more easy going than school." Co-op showed Brandon the importance of communicating with stakeholders and he liked being able to come and go without having to ask permission. Brandon was also able to recognize the autonomy that co-op gave him: "Once you were on the bus, and you get off at your placement, you're on your own. You don't have a teacher to ask things to… So you're on your own, you're definitely more independent." One of the main differences Brandon identified between courses at school, and the co-op course was the independence afforded to students out in the community.

Transition to Adulthood

In high school, Brandon, Keira, and Brooklyn all had different post-graduation plans. Brandon knew he wanted to become a welder, but when a co-op welding placement was not available, he accepted a placement with a small auto garage. While this was not his first choice, Brandon still arrived at the placement with a positive attitude and recognized that he "got very valuable time in a professional workplace, and a lot of skills... like learning how... to diagnose problems." His placement helped to expand his skills and allowed him to explore an interest in cars. Additionally, Brandon was able to see the transferability of skills learned at co-op in the automotive industry to his career path in welding:

> My co-op placement and welding, they're kind of similar in ways, in that you use very similar tools to what you would use in an auto shop. You get familiar with all these interesting tools. When you first walk up to them, you have no idea what they do, but you realize that they're very helpful. So it kind of goes the same for what I'm in college for right now, so it helped me out a lot.

While Brandon's pathway did not change as a result of co-op, he was able to see the value in his experience. Through co-op, he also secured his first part-time job, which taught him about management styles, his own boundaries, and workplace expectations.

Keira and Brooklyn did not have Brandon's clear career goals. Co-op offered them an opportunity to conduct career exploration, which they chose to do in the automotive industry. Keira's parents had hoped she would attend college and ensured that she took classes to maintain that option. Through co-op, she gained insights into her future pathway prospects. Reflecting on her experience, Keira was able to recognize that work-based education allows students to explore "different paths" that they may be unfamiliar with. Keira did not apply to college, and instead entered the workforce after high school. She explained that before her placement, she did not see herself working at a job 40 hours a week, but through co-op, came to the realization that work could be enjoyable: "I think co-op taught me that [working at a full time job] is not only possible, but that it's enjoyable too. And the biggest thing would be, the people that you work with matter the most. If you're working with good people then the work is second. It matters the people you're working with." Through the co-op process, Keira was able to see herself in a professional setting long-term, to realize that she was not interested in pursuing a career as a mechanic, and also to prioritize what she looks for in a potential work environment.

As an Indigenous student in a Catholic school, Keira was acutely aware that the classroom environment was dictated by the values and morals of those in positions of power. The workplace served as contrast and Keira reflected that

> I think high school is based on the values of the people who are teaching it… and this could be because I went to a Catholic high school… In the real world workplace, it's more based in problem solving and direct problems and what you want to do in terms of where you want to work, and what you want to be doing while you're working. There's a lot more flexibility and a lot more choice. A lot more problem solving, which is good in a way. But you need to know how to make decisions for yourself instead of knowing how to enforce the rules of others on yourself.

Keira valued problem solving over listening to rules. She recognized that much of what was taught at school was around discipline and maintaining social order. She found that her co-op placement allowed her more opportunities to problem solve and make her own decisions.

Brandon knew which college program he wanted to attend and Keira had thought about attending college, but Brooklyn knew from an early age that she did not want to attend post-secondary education. Brooklyn struggled with this realization for much of high school. She worried about disappointing her mom and was continuously told by teachers that her goals and aspirations should revolve around post-secondary. Brooklyn's experience at co-op alleviated that pressure, and when asked about what she learned through co-op, she explained, "I realized, it's really okay if [college] is just not for you and I just knew that I could not do it. So knowing there were other options without doing it, made me feel a sense of security." Co-op helped Brooklyn to see that there were viable career options that did not include attending college or university.

Reflecting on her experience, Brooklyn was able to understand how her experience at co-op helped her in her career path:

> Having those co-op placements definitely helped to get me my job now. Cause having that dealership experience, automotive experience… was really great… Also in the sense, where I said, I had no discipline, and if it wasn't for [my placement] teaching me that, I'd probably be in the same place where I was. Obviously my part-time jobs helped too, but those weren't really real workplaces. I mean they were. But not like a career workplace.

While co-op recreated the conditions of a part-time job, Brooklyn saw the environments as different. She saw a future in the automotive industry and felt a connectedness to those in her co-op placement that she didn't have at her part-time jobs. For all three students, co-op was a scaffold that helped them navigate their post high school pursuits.

Discussion

Three former high school students were asked to reflect on their co-operative education experiences. Several themes related to the co-operative education experience emerged through data analysis. The data will now be used to answer the three research questions that guided this study.

Learning in the Workplace

The co-op placements were an effective place for Brandon, Brooklyn, and Keira to learn technical and interpersonal skills. This finding is supportive of previous research results (Aarkrog, 2005; Billett, 2014; Kenny et al., 2016; Musset, 2019). As well, students acquired skills from more experienced adults, who cared about their work and their professions (Billett, 2014; Hughes et al., 2001; Kenny et al., 2016; Schaap et al., 2012). In this research, the school and the workplace were two separate environments. At school, students learned about safety and

workplace guidelines (Hughes et al., 2001; Hutchinson et al., 2011). At work, they learned technical skills (e.g., changing brakes) and soft skills (e.g., problem solving and customer service) (Chin et al., 2004; Savoie-Zajc & Dolbec, 2003).

In an attempt to ascertain the use of routines for learning, students were asked about daily tasks, the ways they were introduced to tasks, and how they remembered them. All three students described a "welcome-in" routine: Brooklyn walked in to meet the same employee every day and put her belongings in the same place, Brandon entered in through the same door and changed into his work boots, and Keira went to her cubby and found her coveralls and safety glasses. While these sequences of events were formative to their experiences, they were not like the routines described by Munby et al. (2003) and observed by Versnel et al. (2008). The routines in this research took the form of a set of regular daily activities, and none of the participants discussed routines in terms of learning how to perform various tasks.

When the students spoke of how they learned on the job, they described an informal process in which they observed a co-worker performing the task and imitated the actions. They were permitted to practise the procedure only if it was developmentally appropriate for them to do so (e.g., changing tires). Brooklyn described how Don, her supervisor, provided one-to-one instruction on how to do a brake job. He modelled each step and allowed Brooklyn to try them as they were demonstrated; however, she was not a licensed mechanic and could not practise the steps on her own. While this situation, where a more knowledgeable person provides instruction through demonstration to a novice aligns with Vygotsky's ideas about social learning (1978), it also bears resemblance to Billett's (2014) ideas about mimesis and Hung's (1999) theory of epistemological appropriation.

Billett (2014) described mimesis as a process of learning on the job whereby a novice observes a co-worker complete a task, imitates the action, and practises it. Similarly, Hung's (1999) theory of epistemological appropriation organized learning into three steps: the novice submits to the mentor, mirrors their actions, and then independently takes action. In most cases, the students in this study only completed the first two steps in these processes due to apprenticeship guidelines. All three phases of Billett's (2014) workplace learning did occur when Brandon learned how to interact with customers. He observed his co-workers greeting customers, he imitated their actions, and then practised the behaviours throughout his placement. In Hung's (1999) theory, the process of submission relies on the novice recognizing the value of the mentor's way of thinking. All three participants had a positive induction process and easily accepted the norms of their placements. For Brooklyn and Keira, the contrast to school heightened the way in which they valued the skills and knowledge that they were learning in the workplace. The processes within Billett's (2014) theory of mimesis and Hung's (1999) theory of epistemological appropriation are also similar to Billett's (2002) ideas about reciprocity between learning and doing. The students learned by performing the task and doing the steps of the task was a part of the learning arrangement. It should also be noted that the co-op students were given opportunities to learn procedures that were outside of their usual duties (e.g., a brake job), and that they all appeared motivated to engage in these additional tasks. This phenomenon within an environment where novices are given opportunities to enrich their learning and are eager to take advantage of the opportunity is consistent with Billett's (2002) concept of reciprocity. Therefore, in this research the participants learned how to do tasks through observation and imitation, the environment was one in which opportunities to learn how to do new procedures and tasks were provided, and the students were motivated to learn them.

Environmental Considerations

The workplace social environments played a pivotal role in the experiences of each participant. Both Brooklyn and Brandon cited their co-workers as their reason for consistent attendance at their placements, and Keira explained how she felt supported and comfortable as a female in the male-only garage. Mimesis (2014) and epistemological appropriation (1999) are sociogenetic forms of engagement, in which the social atmosphere of the workplace greatly impacts learning. While mimesis was theorized for adult employees, drawing on Baldwin (1894) and Kosslyn (1980), Billett (2014) concluded that this interdependent form of learning is a process that people of all ages engage and therefore can be applied to younger workers. Additionally, all three participants were eager learners and therefore able to take advantage of the opportunities given to them (Billett, 2002, 2014). The importance of co-workers, and specifically the social environment that was created by those working alongside the students, aligns with Billett's (2014) and Hung's (1999) conceptualizations.

Previous research results showed that the supervisor and the teacher played important roles in arranging the environment to promote success for students in workplace education. Versnel et al. (2008) reported that the teacher provided pre-placement training on the workplace routines and negotiated accommodations for their students with disabilities. Similarly, Scholl and Mooney (2003) found that the relationship between the teacher and the supervisor was the most important factor influencing the success of a workplace education placement among their students with disabilities. It is therefore possible that the teacher/supervisor relationship was based on developing accommodations for the students in both Scholl and Mooney's (2003) and Versnel et al.'s (2008) studies. In contrast, the results of this research demonstrated that the relationship between the student and their co-workers was the critical factor that promoted social

belonging and learning, which led to a successful co-op placement. In this case, the teachers did not negotiate accommodations with the supervisor as there was no need to do so, even for Brandon who had been identified as having learning disabilities.

The students consistently stated that they felt accepted by their co-workers in their respective co-operative education placements. They developed a sense of belonging within the workplace, which was a welcomed change for Brooklyn and Keira who felt socially isolated at school. The environment also made it possible to provide one-to-one learning, a method of informal learning that appealed to both students. Keira indicated that it was hard to learn and obtain the assistance of the teacher in a typical classroom. For Brooklyn, the one-to-one attention likely helped her focus on the task more closely than in a formal education setting. Finally, it is possible that having a specific person to whom Brooklyn was assigned (Don), helped to forge a mentor-mentee relationship that may have strengthened her sense of belonging (Chin et al., 2004; Savoie-Zajc & Dolbec, 2003). Therefore, in this study the co-workers and supervisors played a role in helping the participants feel socially accepted and provided the space for informal learning to occur.

The students all perceived that they positively contributed to the workplace while they learned. These sentiments are consistent with the environmental considerations of hope theory (Snyder, 2000) and mimesis (Billett, 2014) that both call for a supportive atmosphere in which an individual's learning does not obstruct the community's goals. The students learned at their placements while either adding to, or not disrupting the day-to-day business operations. Additionally, mimesis (Billett, 2014) addresses the hierarchy of formal training in "schooled societies" and the transfer knowledge gap that exists between school/training room and the workplace. While Brandon had completed two high school auto courses, he still credited co-op

with teaching him how to problem solve while working on cars. Similarly, Keira felt that her workplace learning allowed for new ideas, in contrast to school which focused heavily on rules. Finally, co-op allowed Brooklyn to release the pressure of attending post-secondary education, recognizing instead the potential that the workplace held for her after graduation (Blustein et al., 1997). The students' workplace environments permitted them to feel a sense of agency and therefore perceive avenues to success (Snyder, 2000). These findings are similar to results reported by Kenny et al. (2016), who found the individual and environment worked together to inform outcomes.

Motivation and Hope

While Keira's reason for choosing co-op as a course was unclear, Brooklyn explained that her brother influenced her choice and Brandon's mother and sister encouraged him to enroll. This result is consistent with Gaunt's (2005) findings, in which family and friends had the greatest impact on a student's decision to enroll in a work-based program. Both Keira and Brooklyn struggled in high school and considered not completing the credits needed for a diploma. The turning point for both students was their co-operative education placements. Keira described co-op as her "second chance at education" and Brooklyn called it her "escape from high school." These findings are consistent with Snyder's (2000) hope theory, which states that hope empowers people to see possible pathways to achieving their goals. Both students wanted to graduate but before their co-op class, could not see a way of making it through academic courses. Brooklyn began taking co-op in grade 11 and made the course a part of her pathway planning, enrolling in the class two more times. Keira took co-op in her grade 12 year and described the class as pulling her "out of rut." Co-op was an intervention that provided both students with the hope that allowed them to see their pathway to graduation (DeLuca et al., 2015;

Hutchinson et al. 2011; Kenny et al. 2010; Taylor et al., 2015). The hope cultivated at work not only allowed students to see the relevance of their learning, but also encouraged a belief that they were capable of achieving their goals.

In the literature, parents have been cited as an important support to students throughout their co-operative education placements, and well as future career planning (Blustein et al., 2000; Phillips et al., 2001). Brandon's experience corroborates these findings. His mother was very involved in his course-selection process as well as helping him plan for the future. Brandon had a clear career goal and knew how to achieve his aims. Brooklyn and Keira on the other hand did not have parental support and struggled in high school with career planning. It was their co-operative education placements that allowed Brooklyn to recognize that she did not need to attend college to achieve her aims and that helped Keira realize she was capable of not only working a couple of hours a week but enjoying full-time employment.

Persistence Versus Dropping Out

Tinto's (1975, 1997) Student Integration Model (SIM) was an emerging theme that provides another lens through which the data may be interpreted. The SIM was originally developed to explain dropout among students enrolled in four-year postsecondary programs who were living on campus. The SIM consists of three factors: background characteristics (attributes that affect goal commitment, such as family situation, previous experience, and personal characteristics), academic integration (grade performance and intellectual development), and social integration (informal peer group associations, extracurricular activities, and interactions with teachers). When present, the interplay of these factors reinforce persistence in school. However, when absent, they are linked to dropping out. The SIM has also been used to explain dropout and persistence among high school students (Duquette et al., 2006; Holland, 2003).

Likewise, the SIM may provide a deeper understanding of the dropout/persistence situations of Brooklyn and Keira in this investigation. Prior to their co-op placements, both girls indicated that they were close to dropping out of school. In terms of background characteristics, they both wanted to graduate from high school, but traditional courses were not working for them. While Keira's parents expected her to graduate and attend a postsecondary institution, Brooklyn's mother appeared to voice no academic expectations for her daughter. Moreover, Keira's situation was one in which she did not live at home consistently. This instability in her living conditions and the distractions of supporting herself financially impacted the time and energy she could devote to studying. With respect to social integration at school, both participants indicated that they did not have a peer-group at school and were socially isolated. Finally, Brooklyn and Keira stated that they were not doing well at school and did not seem to have a strong relationship with any of their teachers. Therefore, before beginning their co-op placements, these participants had background characteristics that were not supporting persistence, and they lacked social and academic integration. In this case, the SIM explained their thoughts about dropping out of school.

However, once they began co-op, their situations changed. Brooklyn and Keira were both socially accepted by their co-workers and felt they belonged. They were learning skills that may be useful in the present and the future. Moreover, the environment supported learning through one-to-one instruction and mentoring relationships. Once these two participants felt socially and academically integrated, they began to realize that through co-op, they could accumulate sufficient credits to graduate, and they became committed to persisting. In this study, social and academic integration factors appeared to affect the background characteristics of goal commitment, even though the other background attributes did not change. However, in previous

research, it was the background characteristic factor that influenced the presence and strength of the other two factors (Duquette et al., 2006, Holland, 2003). As well, it should be noted that in the present study, it was the opportunity to take co-op that was the catalyst for the change in the situation of the two female participants: from considering dropping out to "seeing the light at the end of the tunnel" and persisting.

Contributions

The results of this research extend our understanding of theory. While Munby's metacognitive theory of routines (2003) did not explain how students in this study learned in the workplace, the data aligned with Billett's (2014) theory of mimesis and Hung's (1999) theory of epistemological appropriation, which supports the use of these theories to understand how motivated co-op students (Billett, 2002) learn technical and social skills in the workplace. Additionally, connecting the hope that the co-operative education experience provided Brooklyn and Keira with Tinto's (1975, 1997) SIM provided a new understanding of work-based learning to transform the possibility of withdrawal into the potential for persistence in high school and its implications for graduation.

This qualitative study also gave voice to students about co-operative education placements and their experiences, perceptions, and how they learn in the workplace. An important contribution and a goal of the study was to increase the understanding of the role of the co-worker. It appears that the informal instruction offered by co-workers was the primary way in which the students learned in their co-op placements. Moreover, the mentor-mentee relationship that develops between co-workers and the co-op students enhanced social inclusion and feelings of belonging.

Limitations

When interpreting the findings presented here, it must be noted that there are several limitations. Firstly, this was a retrospective study, in which the participants were separated by one or two years from the experiences they were describing. Secondly, the participants all had positive experiences at their placements and were all placed in the automotive industry, reflecting a particular context and experience. Finally, the gender and racial make-up of the participants is not representative of the students who participate in OYAP, which has both positive and negative implications.

Implications for Practice

Despite the limitations listed above, this study provides several implications for co-operative education teachers' consideration. Firstly, when working with employers, teachers should emphasize the importance of a positive induction experience. The results of this research show that to learn in the workplace, students need to feel accepted and have a sense of belonging. Secondly, while formal training may be mandated in particular settings (e.g., hospitals or the police station), employers should be encouraged to instruct co-op students using mimesis: observation, imitation, and action (the final phase of which would be conditional on workplace safety and expectations). Thirdly, teachers should recommend co-operative education as a possible intervention for students who, like Keira and Brooklyn, are socially isolated and disengaged from school. Time and care should be taken with these students to intentionally match students with compatible workplaces. Fourthly, female and non-binary students should be provided opportunities to explore traditionally male-dominated workplaces. Teachers should seek out mentors in the community who can facilitate positive experiences for these students. Finally, co-op teachers should check in frequently with students to ensure they feel comfortable

and integrated into the workplace. Interventions on the part of the teacher should be made if there are any concerns.

Future Research

Future studies should focus on a longitudinal study in which students in a variety of trade-related placements are involved. Additionally, interviews should ideally be conducted concurrently, while students are participating in their co-operative education placements, and afterwards to provide a retrospective approach. Although students were not asked directly about their co-op education teacher, the majority of interview questions were open-ended and allowed for interpretation. None of the students mentioned their teacher throughout the interview, which could be in part because the students had positive experiences and did not require workplace accommodations to be negotiated. Therefore, intervention on the part of the teacher was not necessary. Previous studies (Hutchinson et al., 2011; Scholl & Mooney, 2003; Versnel et al. 2008) addressed the role of the teacher in relation to the workplace supervisor. There is still a need for more information on the role of the teacher in relation to the student, that should be addressed in future research. Additionally, more research using mimesis (Billett, 2014), and Hung's (1999) theory of epistemological appropriation as conceptual frameworks should be conducted with the workplace supervisor to understand how a workplace social environment is cultivated and what scaffolds are in place for a co-op student's induction into the workplace.

Understanding the barriers to entry for certain demographics of students based on race or gender in trade-related fields is imperative if there is to be an improvement in apprenticeship recruitment and retention rates. The Canadian government, both federally and provincially within Ontario, has made promoting the skilled trades a priority, as evidenced by websites and paid radio and television promotions. Individual barriers which people are able to overcome,

such as Brandon's ability to see the transferability of auto mechanic skills to that of welding, are different from the systemic barriers that institutionally must change. Including participants, such as Keira and Brooklyn, who were exposed to, but chose not to enter a trade provides valuable insight.

Conclusion

This study was designed to increase our understanding of the conditions that create a positive or negative co-operative education environment. With individual histories and experiences, the participants provided three unique reflections to examine. Through data analysis, trends and similarities emerged. In this study, a successful placement involved three factors: social belonging and active learning and the reciprocal relationship between them, as well as the hope that was ignited, which crystalized the academic and career goals the students set for themselves. Ultimately, the conditions that produced a sense of social belonging had the greatest impact on student learning and persistence. Most interesting, and possibly consequential for the purposes of education, is that all three students preferred to be at their placements rather than at school. While this research described the environmental conditions that contributed to a positive co-operative education experience, it is possible that administrators need to consider how they and their teachers can strengthen social belonging in the classrooms and throughout the school. The results of this study point to the importance of social integration and how it contributes to learning.

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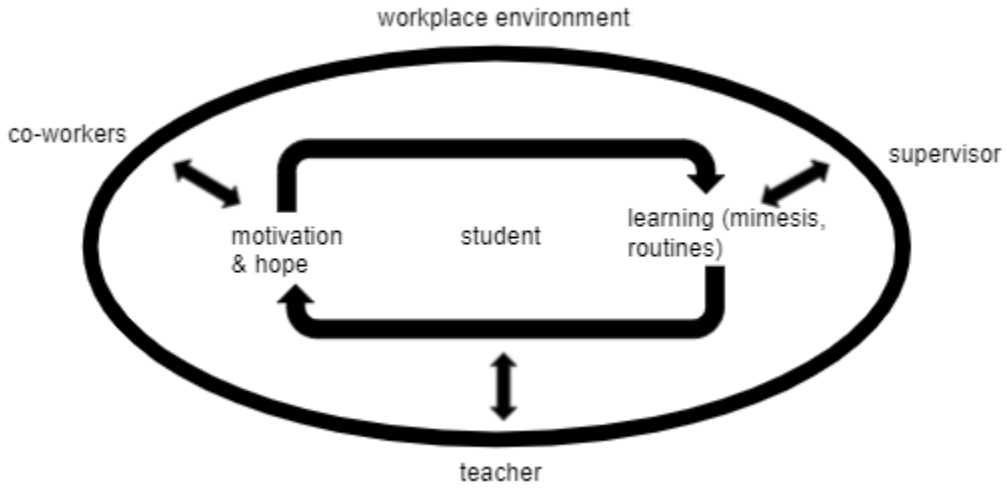
Appendix A

Figure 1

Conceptual Framework



Appendix B

Table 1

Research Questions Connected to Theories

Research question	Theory
1. How do students learn in the workplace?	Metacognitive theory of routines (Munby et al., 2003)
2. How do environmental conditions, specifically co-workers, influence a student's experience of co-operative education?	Theory of mimesis at work (Billett, 2014)
3. How is learning linked to student feelings of hope and motivation while at work?	Hope theory (Snyder, 2000)

Appendix C

Questions for Interview 1

1) Tell me about elementary school and high school. Did you move around? Stay in one school?
2) Tell me about high school. Did you go to the same high school?
3) Do you have any positive or negative memories of elementary school? high school?
4) Tell me about a teacher or a class that you enjoyed? What made it enjoyable?
5) Tell me about a teacher or class that you didn't like at all. Why did you not like it?
6) Did you have trouble making friends or keeping friends?
7) What was your friend group like in elementary school? Did it change in high school? Did it change throughout high school?
8) Did you have any negative experiences with peers?
9) Did you ever have an IEP? Was it informal or formal? What were some of your accommodations? When did you get your IEP? What was the diagnosis?
10) Did you have any part-time jobs in high school?
    a) Tell me about it.
    b) How long did you stay there?
    c) Why did you leave that job?
    d) What was it about the job that you liked?
    e) Who taught you how to do the tasks?
    f) Tell me about your experience with your co-workers?
    g) What was your relationship with your boss?
    h) Did your job affect your school work?

i) Did it motivate you to do school work or focus on particular classes?

j) Did it affect certain subjects?

k) Did it affect your grades?

l) How many hours a week did you work?

11) Why did you choose to take co-op?

Questions for Interview 2

1) During high school, who did you live with?
2) What level of education did your guardians have?
3) How involved were they in your course selection process?
4) Did they want you to take co-op?
5) Did your guardians influence your choice of where you wanted to do your placement?
6) How did you decide on where you would complete your placement?
7) Tell me about your co-op experience
    a) Where was it
    b) What did you do
    c) Who did you work with
    d) When was it
8) What was it like getting up in the morning before going to your work placement?
9) How did you get to your placement? Did you always feel fine? Were you nervous at the beginning?
10) How did you feel on your way there?
11) Who did you first meet upon entering the building?
    a) How did that make you feel?

12) What did you do there? - there may have been a set of duties, but what did you really do? How did you feel about that?
13) Which tasks did you like most?
14) Which tasks did you like the least?
15) Did you have a set routine?
16) Who taught you how to do the tasks? Supervisor or colleague? How did you remember what to do? Was there a checklist? Constant supervision?
17) How often did you meet your boss? Who supervised you? Who was making sure you were doing the tasks? Who was giving you feedback on how you were doing the tasks?
18) Who did you interact more with, your supervisor or other staff? What were they like?
19) What was the social environment like? Did people hang out after work together?
20) What did you enjoy most about working at your placement?
21) What motivated you to go to work every day?
22) Did you feel like there were multiple ways to be successful at work?
23) Did co-op motivate you in school? Did it increase your motivation to take certain courses? Did it increase your interest in school?
24) Did you feel more independent as a result of taking co-op? Can you explain or give an example?
25) Evaluation of the experience: What stands out the most about your co-operative education experience? If you had one or two memories, what would they be?
26) What are positive and negative things about the co-op experience?

Questions for Interview 3:

1) Would you recommend reusing that placement? Should a particular kind of person go there? Who would thrive there?
2) What did you get out of the co-op experience?
3) What were the benefits of co-op?
4) What were the disadvantages of co-op?
5) If there was one or two things that you learned, what would they be?
6) Was there anything you learned about yourself that was positive or negative?

Personal Reflection

I began the process of applying for my Master's degree because I had started my career as a co-operative education teacher and I saw the power this program had on my students. Students who hated school, who struggled with coursework, who were disengaged from the school community were thriving in their co-op placements. This made me want to explore and better understand the phenomenon: What is it about co-op that makes students feel successful? and What can I do as an educator to increase the number of students who benefit from their co-op experience? This personal reflection will be divided into two sections: new understandings about research and implications for my teaching practice.

New Understanding of Research

The ultimate learning with regards to research has come at the very end of my Master's. In writing my own article, I have come to see how much of the researcher is really in the findings and discussion. Regardless of how impartial one tries to be, the results presented are so relational: the raw data, the researcher's interpretations and previous literature coming together to present one version of the findings. The concept of bias resonated with me, and I frequently journaled about it. In one entry I questioned my interpretation of the data:

> What I find interesting and of note in Keira's interview is directly connected to my experience with her. To know her as a student and to speak to her now – the difference is incredible - her maturity is blowing me away. Even though Cheryll and I analyzed the data separately, I still think about how my personal connection causes certain quotes to stand out to me: the ones that exemplify her growth and change. I wonder if it will be the same with Brandon and Brooklyn? I knew them to a lesser extent, but I can't analyze the data outside of the context in which I know them.

The concept of interpreting the data frequently appears in my journal entries, and I still grapple with it. Rereading the interview transcriptions four months later, different passages stand out to me and I wonder how different the article would be if I wrote it now.

Conducting the literature review was both overwhelming and so interesting. Reading about the studies conducted in Canada and in other countries was so edifying. Every time I read something new, it inspired me to think of further research I would like to conduct. Chan's (2013) study for example, with New Zealander apprenticed bakers produced fascinating findings. Additionally, I reveled over how powerful the research can be when you engage with participants for a long period of time. Chan (2013) together with Marchand (2008) inspired me to consider longitudinal studies in the future that comprise multiple stakeholder perspectives.

In their book, *Qualitative Research: A Guide to Design and Implementation* (2016), Merriam and Tisdell implored researchers to understand their interview biases and to be critical and systematic observers. The authors also emphasized self-reflection: in questioning what is observed or speculated during the research process, the researcher is able to consolidate ideas and perceptions, and begin their initial data analysis. While analyzing the interview data, I employed the contemplative practices described by Merriam and Tisdell (2016) to recognize my own biases and to work towards reducing my influence on the data collected. This space also allowed me to document ideas that I felt were personally significant, but conceptually outside the scope of my research. One such occasion is documented in my journal:

> Billett writes so clearly. His organization works so well. The learning theories he outlines - in the context of adult learners in the workplace - are so similar for high school co-op students. For example, his explanation of how "person dependent" learning can be, is in line with what my participants brought forward. There is the interplay between what is

> expected of the student and how the student is approaching the experience. Keira and Brooklyn were starved for positive relationships, and co-op provided them with people who were happy to help and outside of the school environment (which had negative connotations and patterns of exclusion/discipline). Billett's explanation of Lave, Jordan, and Valsiner in the context of WBE provides me with a new lens in which to see my students and their workplace experiences.

While elaborating on social learning theories was outside the scope of my paper, I enjoyed learning about them, and they also helped to form my understanding of how students learn at work.

Writing the findings section was undoubtedly my favourite part of this process. I poured over the interviews repeatedly, finding new meanings and connections each time. While I found the process of reading, rereading, highlighting, and comparing the data illuminating, O'Leary (2017) cautioned that "when meanings are intricate and complex (which is often the case), reduction can be incredibly difficult" (p. 256). While formulating my findings and discussion, I continued to ruminate on O'Leary's words. In taking careful consideration of what to include and exclude, I hoped to make meaning from each participant's experience. During the reading, marking, and labeling phase, I documented tentative labels. I did not want to stifle the process by locking in categories too early. Seidman's (2019) emphasis on the need to tell a story led me to include passages from the interviews that would provide the reader with a beginning, middle, and end. Due to the length of my article, it was necessary to reduce my findings section during the editing phase.

Understanding Expectations

Negotiating the needs of the co-op students with the expectations of the supervisors, whose priorities typically include running a business and making money, can be difficult. One longitudinal study that I would be interested in conducting is examining the difference between the employer's vision and what the students believe is expected of them. In this study, the students explained what they thought was required of them. Keira thought, "They were just looking for me to be present. They wanted me to be aware of what was going on and looking and being interested in what they were teaching me." Brandon responded that, "Ya, they mostly said, 'do what the mechanic does, or help them with what they need to do.'" Finally, Brooklyn felt that her supervisor "was looking for someone who was just willing to do whatever it took to get the job done." Keira's response focused on her own learning and what she could get out of the placement, while Brandon and Brooklyn had been made to feel that their productivity was of the greatest value. Understanding the discrepancy between actual employer expectations and what students perceive to be required of them could help co-op teachers to bridge the gap and alleviate misunderstandings. In my journal, I ruminated over the idea that some employers may not be able to answer that question clearly. Strong mentors are crucial to the success of students, and yet finding them and establishing partnerships can be difficult.

Implications on My Own Teaching

I have been teaching for seven years. I supply taught for a year, the next year I had three LTOs: one as co-op teacher, one as an English as a Second Language itinerant teacher, and one as a special education teacher to junior students with mild intellectual disabilities and Down syndrome. I then became a permanent teacher in grade 7 and 8, where I taught for two years. In my fifth year, I moved to my current position at high school, where I have taught co-op, grade 9 Introduction to Technology, grade 12 Mentorship, and been a special education resource teacher.

Reflecting on these varied teaching opportunities, it surprises me how impactful conducting the interviews with Brooklyn, Keira, and Brandon was for me. With my experience working with diverse populations of students in terms of race, socio-economic status, country of origin, age, learning challenges, sexuality, and gender, I would have thought that I was aware of the struggles and realities of school for students. While intellectually I know that each student has their own perspective and unique experience, I think it took students vocalizing and retelling their lived-experience for me to have this mindset change. In my journal, I documented this transformation:

> I'm shocked at how open Brooklyn was with me. She shared such seemingly private information with me so freely. She and I had a nice connection when she was at school, but with her high school experience ending with covid lockdowns and all that she has been through since, that seems like a long time ago. Her lack of friends and her parent's separation seem to be the biggest weights on her when she looks back at high school. Belonging is so crucial to engagement.

Speaking candidly about the high school experience for people with one- or two-years separation from it provided me with a rich perspective with which to see my current students. Understanding how students' lives impact their experience of school has helped me to be more curious about my students' lives outside of school. While statistics on things like divorce or poverty may have desensitized me, my interviews have prompted me to understand the deep and personal affects that these experiences have on children.

One barrier to true empathy has come from my privileged position as a white, middle class woman. The self-reflective work I did through my MA courses with professors like Dr. Nicholas Ng-A-Fook and personal readings on anti-racism lay the groundwork for this mentality shift to occur. Conducting the interviews along with this introspective contemplation have

worked together to shift my understanding of my students and myself. I still have work to do, but I know I have begun an important journey. While I have often thought that my study would have made a more powerful impact had I interviewed the students during their placements, there were benefits to conducting the interviews retrospectively. The students were very candid with their recollections, and I don't know if they would have felt free to speak their truths or had the same understanding of themselves and their experiences while still in high school.

What I learned from Keira

Keira was the first student that I interviewed and the only one who I personally taught. Keira and I had a very good relationship when she was a student, and I was excited to interview her. We had difficulty establishing a date and time, and when we did speak, it was over the phone while she was driving between her two jobs. There were a lot of impactful moments during our interview, but upon reflection, this was the most provoking: "I think with high school the main negative memory I would have was feeling like it was made for one kind of person. It was squared off and I didn't fit in." I went on to ask what kind of person Keira thought school was meant for, and she replied, "I think somebody who has a very stable home life and somebody who has the ability to put all of their attention on school. And to not really have any outside problems." When Keira said these words, it felt like a punch to the stomach. I knew that I was culpable in this system. After the interview, I asked myself: In what ways do I participate in a system that makes students feel undervalued and excluded? I continued to think about why Keira's words affected me so much. Her words above are likely the quote that I have journaled most about. My reaction to her experience has helped me identify the need that I have to "make school work" for all students. I've thought a lot about "what needs to change for school to 'work'

for all kids." A lot of my "solutions" center around systemic changes that I struggle to see how I can facilitate from within the system.

In addition to calling out the system, Keira also reflected on the benefits of her co-op experience: "Especially for someone with anxiety and depression and all of those things, it really just made it so much easier to customize my day to something that worked better with me." Initially when I was working with the interview data, I found myself asking myself "so what? What are the implications of this? How can I link this quote to my conceptual framework and research questions?" But as a teacher, I took a step back and knew that Keira's sense of ease and purposefulness was in itself enough. It was quotes like these that made me realize the weight of the data that I was working with. I really wanted to honour the students' experiences and I hope that I was able to achieve that.

What I learned from Brooklyn

While I did not teach Brooklyn, I was familiar with her as a student. She was charismatic and confident. However, similarly to Keira, I was unaware of what she was dealing with on a personal level throughout high school. I think the one-on-one interview style and the separation Brooklyn had from school allowed for genuine conversation and transparent disclosure. The power of one-on-one time with students had me thinking of ways that I can integrate it more into my practice. My interview with Brooklyn was conducted over video call. I enjoyed this format more than a phone call, as seeing her facial expressions and body language made it much easier to connect with her and also not interrupt her.

Brooklyn had many meaningful and insightful reflections on her co-operative education placement, and also on school as a whole. In response to a question about feeling more independent as a result of co-op, Brooklyn responded, "School wasn't useful, I didn't see the

point in it, so to know I was going somewhere where I was going to make a difference, like fix a car, I know I was going to do something, not just school work." Brooklyn's reflection helped me ask questions like "how I can make school more 'useful'". If students don't see a point in what I am teaching, they won't remember it, they won't engage with it, and it will bring no meaning or benefit to their lives. My initial reflection resulted in ideas around creating more real world connections, real world consequences and impact, and more specific content for learners. I hope to continue to build on making school more useful for students on an individual level.

What I learned from Brandon

Brandon was able to see the transferability of skills learned at co-op in the automotive industry to his career path in welding:

> My co-op placement and welding, they're kind of similar in ways, in that you use very similar tools to what you would use in an auto shop. You get familiar with all these interesting tools. When you first walk up to them, you have no idea what they do, but you realize that they're very helpful. So it kind of goes the same for what I'm in college for right now, so it helped me out a lot.

Brandon came to this understanding after he had his placement, but regardless, he was still willing to give the auto placement a try. Helping students realize that skills learned in one workplace are transferable to another workplace is one of my goals as a co-op teacher. The literature on transferability has so far focused on the school to work transition, and there is less information on the transfer of skills from one workplace to another. Oftentimes students request a placement, but logistically, it is not possible. For example, a student may ask to work on a construction site, but they don't own a car, so they aren't able to travel to the required sites. Consequently, we brainstorm alternative placement options for them, such as a cabinet making

or flooring company. Some students are disheartened by this and want to drop the course because they can't see the value in going to a different placement. After the experience, students typically have a similar understanding as Brandon, but it's the students who are unwilling to try a placement that I struggle to reach. I wonder how we can help students see the value in a workplace even when it isn't exactly what they wanted?

Conclusion

I am very grateful to have had this experience. I learned from many passionate, insightful, and engaging professors. I also had the opportunity to learn from my former students, who provided me with immense professional growth that I could not gain elsewhere. The changes that this experience will bring to my pedagogy will have important implications for my teaching practice and in turn, my future students.