Development of Teacher Efficacy for Inclusive Practices in Canadian Teachers

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A thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree in Education
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Abstract

In Canada’s education sector of society, inclusion upholds the notion of equity for all students regardless of any ability, race, gender, or mental well-being. With this notion, children have the right to a safe classroom environment that fosters a sense of belonging. Research has shown that for teachers to effectively implement inclusive practices, they must hold a strong notion of teacher-efficacy for teaching students with Special Education Needs (SEN). Teacher efficacy is “the belief or conviction that they can influence how well students learn, even those who may be considered difficult or unmotivated.” Importantly, research has found teachers’ efficacy to be related to higher student achievement outcomes, motivation, and building self-efficacy in students themselves. Research Gap: Despite understanding Teacher-efficacy to be related to many positive outcomes for the use of inclusive teaching, there is little known about its development and how it changes from preservice to in-service teaching. Subsequently, the experiences that influence teacher efficacy development are also less clear. Thus, the current research aimed to answer the following two questions through a mixed-methods design: 1. How does teacher efficacy for inclusive practice change from preservice to in-service? 2. What experiences influence teacher efficacy over time? Method: Preservice teachers from 11 Faculties of Education across Canada were given the Teacher Efficacy for Inclusive Practices questionnaire to measure efficacy scores across three time points from preservice into in-service work. In addition, participants were interviewed twice to investigate the experiences related to the development of efficacy. Results showed teacher efficacy for managing behaviour and using inclusive instruction to increase significantly from the period participants were in their first year of Faculty of Education into their second year and was maintained into the first year of teaching. Teacher efficacy for collaboration did not change significantly at any time point. A thematic
analysis of interviews showed practicum, associate teachers, and coursework to be the most frequently discussed experiences as impacting efficacy levels. These findings reveal new insight into the supports teacher candidates and in-service teachers require to increase their efficacy for using inclusive practices.

Keywords

Inclusion; inclusive practice; Canadian teachers; preservice teachers; in-service teachers; teacher-efficacy; Special Education Needs (SEN)
Summary for Lay Audience

In Canada’s education sector, *inclusion* upholds the notion that all students regardless of any ability, race, gender, or mental well-being have the right to equity. Therefore, all students have the right to a safe classroom environment that fosters a sense of belonging. In order for inclusion to take place and for all students to be included, it is paramount that Canadian teachers are effective in their inclusive teaching practices.

What makes a teacher able to be inclusive? The answer is *teacher efficacy* (termed *confidence* in this thesis) which is the teacher’s belief they can impact how the child learns regardless of the child’s different needs. Research shows that high teacher efficacy is related to higher achievement, motivation, and self-efficacy in students themselves. Although teacher efficacy is related to many positive outcomes for the use of inclusive teaching, there is little known about its *development* from initial teacher education (preservice) to beginning teaching (in-service). *The current research aimed to answer* 1. how teacher efficacy for inclusive practice changes from preservice to in-service and 2. What *experiences* influence teacher efficacy over time. Participants from 11 Faculties of Education across Canada were interviewed twice to investigate the experiences related to the development of efficacy. They also filled out the *Teacher Efficacy for Inclusive Practices* questionnaire across three time points from preservice into in-service work to measure efficacy scores for inclusive practices.

*Results* showed that teachers became much more confident for *managing behaviour* and using *inclusive instruction* from their first year of Faculty of Education into their second year and that efficacy did not significantly decrease when they entered the teaching profession. Teacher efficacy for *collaboration* did not change significantly at any time point. The experiences that impacted efficacy levels were practicum, associate teachers, and coursework. These findings
reveal new insight into the supports teacher candidates and in-service teachers require to increase their confidence for using inclusive practices.
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Chapter 1: The Research Problem

Introduction

Let’s start this dissertation with a simple question. Do you think you are a good driver? If you have high self-efficacy, you would answer yes, despite what external friends and family members might say. Perhaps they would like to remind you of the time you went over the curb or backed into a wall, but you might chalk those up to bad luck or a single incident. Self-efficacy is the belief that one has the capabilities to execute the actions needed to create a desired outcome (Bandura, 1977). Thus, if you believe you can successfully drive without any accidents that is all that is required to have high efficacy (whether you truly have the ability to drive accident free or not). What shaped your efficacy levels for driving? Has it changed over time?

Self-efficacy can be applied to any given task. It is the focus of this dissertation to understand teachers’ efficacy, or in other words, the beliefs teachers have about their own ability to use inclusive practices in diverse classrooms across Canada, with students who have special education needs (SEN). Note, at times in this dissertation, such as in the interviews with participants, these special education needs are also referred to as “diverse needs” to allow for discussion of all types of exceptionalities including giftedness. Specifically, this dissertation seeks to (a) examine beginning teachers’ efficacy across time from preservice to in-service teaching and (b) Understand the experiences during these time points that both decrease and increase efficacy.

The Research Problem

Inclusion is a framework implemented in schools worldwide, including Canada, in which all students of every background and ability are taught at their neighborhood school, in their age-appropriate regular classroom, and encouraged and welcomed to participate in all aspects of the
school’s culture and activities (Inclusion BC, 2012). Despite the wide use of inclusive practices in Canadian classrooms, (see Loreman, 2010 for a review of these practices), many beginning teachers perceive themselves to be inadequately trained to engage in inclusive practices (Gokdere, 2012). The use of inclusive practices has been shown to have many positive impacts on academic performance (see O’Rourke, 2015 for a review; Ruijs & Peetsma, 2009), overall health, socialization and cooperation skills, and lastly, positive attitudes for wanting to go to school (Timmons & Wagner, 2008). Given the benefits of inclusion for all students, understanding the teacher characteristics that predict the use of inclusive practices has therefore become a widely-researched area in inclusive education literature.

Research examining the implementation of inclusive practices by teachers tends to fall into two areas of research. The first is teacher attitudes, beliefs, and moral views toward inclusion and the second examines skills and perceived efficacy (confidence) for implementing inclusive practices. The focus of this dissertation will be on the latter to examine teacher efficacy for inclusive practice and examining efficacy longitudinally from the time of preservice teaching to the first year of in-service teaching. Researching teacher efficacy for inclusive practice is critical to the successful implementation of inclusive practice and the effects it has on students. Teachers who exhibit high levels of self-efficacy tend to have more positive outcomes in their students’ achievement, motivation, and confidence compared to teachers who have low levels (see Tschannen-Moran et al., 1998 for a review).

There are various research studies showing demographic factors such as gender, sex, grade taught, and experience working with children who have SEN to influence teacher efficacy levels for using inclusive practices (e.g., Specht et al., 2016; Specht & Metsala, 2018), however, these studies lack a longitudinal perspective as well as a qualitative view of why these factors
influence efficacy. There is some research examining teachers’ experiences qualitatively, however, they are also not longitudinal; for example, Young et al. (2018) sought to examine the influential experiences of beginning teachers in their last year of teacher education programs. They found several parts of practicum experience to increase efficacy such as learning to manage behaviours, influencing academic outcomes, building relationships with students, and working with other professionals. The results indicate how rich data can be gathered from qualitative interviews to better understand which experiences influence efficacy; however, these experiences were focused purely on the last year of participants’ teacher education programs. Research is still warranted to better understand the development of these experiences.

Research Purpose and Questions

**Thus, the two research questions the following dissertation seeks to answer are:**

1. How does teacher efficacy for domain-specific situations change? The Teacher Efficacy for Inclusive Practice Questionnaire (TEIP) (Sharma et al., 2012) will be given at three time points to understand how efficacy changes across time (from preservice to in-service) for classroom management, collaboration, and instruction. (Study 1)

2. What *experiences* influence teacher efficacy over time? And *how* do these experiences influence efficacy? This research aim will be fulfilled through two interviews asking participants an open-ended question about experiences that have influenced their efficacy (termed as confidence). (Study 2)

Organization of Following Chapters

There are five remaining chapters in this dissertation. The following chapter (chapter 2), outlines the theoretical framework of self-efficacy and the development of teacher efficacy. It ends with the evolution of how these two constructs exist in the context of inclusive practice.
Chapter 3 provides an overview of the literature examining teacher efficacy and teacher efficacy specifically for inclusive practice. Chapter 4 introduces Study 1 and examines the quantitative results followed by a brief summary. Chapter 5 presents Study 2 which includes the interview data and illustrates a thematic analysis followed by a brief summary of results. Lastly, in a discussion, chapter 6 brings together the results of Study 1 and Study 2.
Chapter 2: Theoretical Framework

The first section of this chapter outlines Bandura’s self-efficacy model. Self-efficacy has served as the theoretical framework for conceptualizing the research question, methodology, and interpretation of results of the present dissertation. First, self-efficacy is introduced and described, followed by the introduction of teacher efficacy and a review of its developmental history as a construct. Lastly, the relationship between teacher efficacy and inclusive practice is discussed.

Self-Efficacy: An Overview of Bandura’s Theory

What is self-efficacy?

Bandura (1977) defines self-efficacy as the, “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1977 p. 3). In other words, self-efficacy involves one’s beliefs or judgments about the ability to create a desired outcome in each environment or situation. Self-efficacy is therefore defined as a future-oriented belief because one is making judgments about future performance. Self-efficacy is a motivational construct based on self-perception of one’s ability rather than actual levels of ability. Over time, these beliefs allow people to engage in various thought patterns and create emotional states that allow them to pursue goals, persist in challenging situations, and continue giving effort despite setbacks. These cognitive processes examine how personal attributes interact with the environment which help form judgments and predictions about the capacity to be successful in future events. For example, an individual who has consecutively won first prize medals for the 400-metre sprint, has subsequently built high levels of efficacy for this event. Before the next race, the athlete will likely anticipate they have the skills to perform well and feel confident in doing so. In this example, the individual’s perceived self-efficacy matches their actual ability. In
another example, someone who is a slow runner (as judged by others in the external world), but perceives themselves to be an accomplished runner, will still have high self-efficacy. Not only do these examples highlight efficacy as being a personal judgement about one’s ability, but it also highlights the individual’s judgement of the likelihood of being competent in the behaviour (i.e., winning the race). The distinction between the two judgements are described in the next section.

**Response-outcome expectancies and efficacy expectancies**

Bandura differentiated between *response-outcome expectancies* (a person’s estimate that behaving a certain way will yield a specific outcome) and *efficacy expectancies* (the belief that one has the ability to perform the behaviours needed to create the desired outcome). The response-outcome question asks, “If I accomplish the task at my given skill, what are the consequences?” and the efficacy expectancy asks, “Do I have the ability to coordinate the skills and actions required to complete a task in a specific way?” Typically, efficacy expectancies help to create what the outcome expectancy will be. For example, if we take the running example, the athlete practices running and has indeed, won many races recently which has formed high efficacy (this individual therefore believes they can perform the behaviours needed to win the race). Second, the response outcome would likely be that this individual believes the consequence is winning the race. Despite both efficacy outcomes and response outcomes aligning in this example, Bandura illustrates how it is not always the case that the two go hand in hand.

Bandura differentiated response-outcome expectancies and efficacy expectancies because individuals can believe certain actions will lead to certain outcomes (response-outcome expectancy), yet, if they have doubts about their ability (efficacy expectancy), then just knowing
what to do in order to create a specific outcome (outcome expectancy) does not necessarily influence the behaviours they will engage in. Taking our athlete example, this individual may know that training each day could yield winning results at the next track meet (outcome expectancy), but this individual may also have doubts about their ability to win at the race (low efficacy) and may end up avoiding practicing or training for the race. In other words, efficacy is future-oriented and highlights one’s perception of their competence to yield results rather than their actual ability to yield a specific result. Thus, as Bandura says in his overview of self-efficacy, just knowing what behaviours will lead to the desired outcome is not enough to increase one’s efficacy. Instead, one must believe they have the ability to perform these behaviours (Bandura, 1977). These beliefs are important in predicting efficacy levels as they impact how much effort one puts into the task, how they deal with failures and obstacles, how long they will endure the process, and the type of physiological reactions they will have during these instances (Tschannen-Moran et al., 1998, p. 203).

**Bandura’s four sources that influence efficacy**

Bandura (1977) defined four avenues that influence efficacy development, which he refers to as, *sources* (see Figure 1 for an overview). The first is *performance accomplishments*, or sometimes referred to as, *mastery*, which Bandura states is the most impactful source on self-efficacy. Here, individuals reach mastery through multiple successes, and lower mastery through repeated failures, especially if these experiences occur early in learning (Bandura, 1977, p. 195). The timing and cycle of successes and failures is pertinent to learning because Bandura says if an individual repeatedly experiences successes, then strong efficacy is expected and developed. From here, any occasional failure will not be as influential on one’s self-efficacy. This individual then learns that their effort can overcome these failures, their efficacy becomes stronger and even
generalizes to other situations. Secondly, *vicarious experience* is another source of experience that impacts self-efficacy whereby an individual witnesses other people engaging and performing a task without any negative consequences. This allows the individual watching to internalize that they, too, will improve if they persevere with the task and allows observers to watch models perform tasks, allows individuals to avoid making costly mistakes.

Bandura highlights subcomponents and steps involved in vicarious learning. First, attentional processes are needed in the observer to be attracted to wanting to learn from the model. Second, retention processes are present in which case the observer must form a memory of this behaviour. Thirdly, the observer must have the chance to reproduce this behaviour physically using the symbolic representations from memory. Lastly, motivational processes must exist; that is, observers must outline their perceptions of the positive and negative outcomes that could occur that would increase or decrease the probability of being able to successfully perform the behaviour. To help with these four stages, Bandura says that having models who are perceived as competent, successful, and able to work through challenging situations themselves and be successful are the most influential models. Other facts are having a perceived similarity between the model and observer and having multiple models to learn from (Bandura, 1977).

Thirdly, *verbal persuasion* entails using suggestion to teach someone to believe they are capable of successfully completing a task that has been challenging for them in the past. Bandura highlights, however, that verbal persuasion may be more helpful in outcome expectations rather than increasing one’s self-efficacy. Lastly, *emotional arousal* influences self-efficacy through physiological means. When one is in a stressful or demanding situation, emotional arousal can be a good detector of perceived self-efficacy. More specifically, Bandura says high arousal in the body occurs when one is anxious or vulnerable, and thus, can be a telling
sign for how confident or efficacious they are in the situation. If one does not have the physiological arousal from anxiety, they can likely attest this to having high self-efficacy for this given situation or task.

To continue generalizing efficacy to new situations and to ensure levels of efficacy do not decline, Bandura et al. (1975) posit the best practice is to use more general aids from a role model, then slowly remove the external aids so an individual can verify their own efficacy. This individual is then able to use “self-directed” mastery by gaining independence and eventually generalize and strengthen this efficacy to new situations.

Bandura’s self-efficacy theory has expanded to describe the efficacy levels of teachers and is referred to as teacher-efficacy, we turn now to describe teacher-efficacy, its development, and measurement history.

**Teacher Efficacy**

Consider Jim (a fictional person for the sake of this example), who is a preservice teacher in his last semester at his teacher education program. When asked by researchers if he feels confident teaching, he says yes. He just completed his final practicum and gained a lot of great...
teaching experience. In his practicum, he was able to apply what he learned from course work and carry out lessons in the classroom successfully (mastery). He felt a strong connection with his supervising practicum teacher who he watched teach and later modelled the strategies she used to teach (vicarious experience). Eventually, after shadowing and watching his supervisor teach, he was able to teach with her watching, and eventually even taught some lessons on his own. Jim’s practicum teacher encouraged him and provided lots of constructive feedback (verbal persuasion). Over time, he became excited to teach more and his nerves calmed down when he approached the class (emotional/physiological arousal). He now feels optimistic and confident to enter his first year of in-service teaching. In this example, we see Bandura’s sources of efficacy at work and the link to a teacher example. Furthermore, Jim’s efficacy expectancy (his efficacy for teaching) matches his outcome response expectancy (believes he will be successful teaching in the future). It is important that Jim not only models his teaching after his supervisor, but that he is able to create his own mastery experiences through independent teaching opportunities in his training to strengthen and generalize his efficacy to new situations in the future (Bandura et al., 1975).

Teacher efficacy is defined as teachers’ beliefs about their abilities to execute and organize the actions necessary to bring about a desired outcome (Tschannen-Moran et al., 1998) or similarly, “the belief or conviction that they can influence how well students learn, even those who may be considered difficult or unmotivated” (Guskey & Passaro, 1994, p. 628). The growth of teacher efficacy occurred quickly in the latter half of the 1970s around the time Bandura introduced his prominent theory of self-efficacy and the RAND organization began introducing self-efficacy items on teacher questionnaires. Teachers’ efficacy beliefs were shown across research studies to be a crucial factor related to many aspects of education. These included
student achievement outcomes (Armor et al., 1967; Muijs & Reynolds, 2002; Ross, 1992), and achievement outcomes at the school level, (Caprara et al., 2006), student motivation (Midgley et al., 1989) and even students’ own sense of efficacy (Anderson et al., 1988 as cited in Tschannen-Moran & Woolfolk Hoy, 2001). Furthermore, teachers’ efficacy beliefs relate to their own behaviour in the classroom including the amount of effort they put into teaching and goals they set which in turn elicit more planning and organization for those with high levels (Allinder, 1994). Teachers with high efficacy also persist longer with a challenging student (Ashton & Webb, 1986 as cited in Tschannen-Moran & Woolfolk Hoy, 2001), and are even less likely to send a student to special education services than low efficacy teachers (Meijer & Foster, 1988). Lastly, teachers’ personal and collective efficacy contribute to higher levels of job satisfaction (Caprara et al., 2003). Despite the increase of research on teacher efficacy over 30 years between 1976 to approximately 1998, there were many questions about its research direction and overall maturity as a construct. Many critiques existed to analyze the research done in this time period (e.g., Goddard et al., 2004; Wheatley, 2005). A brief history of the construct, highlights of these critiques, measurement challenges, and the present state of teacher efficacy are described below.

**Overview of teacher efficacy origin**

In 1976, researchers from the RAND organization examined the success of various reading programs and interventions with teachers in the United States. One instrument used to measure the reading programs’ successes was a questionnaire given to teachers to measure their characteristics and student learning. There were two items on this instrument that were the most powerful factors examined for predicting students’ success (Armor et al., 1976) and it was these two items combined that gave birth to the term teacher efficacy.
The first item asked, “When it comes right down to it, a teacher really can’t do much because most of a student’s motivation and performance depends on his or her home environment” and the second asked, “If I really try hard, I can get through to even the most difficult or unmotivated students.” Teachers’ efficacy, as measured by these two items, was found to have a strong positive influence on both student performance and the amount of project goals attained. In addition, the amount of effort put forth by teachers to continue using the intervention methods after the research study ended also increased. It was from this study that teacher efficacy was born and researched extensively in the following decades (Tschannen-Moran et al., 1998).

For teachers who agree with item one, it would suggest this individual believes the environmental factors outside of school over rule any positive influence a teacher might try to use on a student (e.g., violence, conflict at home, abuse, gender, race, economic factors, and a child’s emotional, and cognitive needs) and those who disagree, believe teachers have the ability to overrule any negative factors through successful teacher methods to ensure a child is successful. This question is aimed at what was labeled general teaching efficacy-GTE as it looks more broadly at teachers’ efficacy as a profession.

Teachers who agreed with the second statement believe they have enough confidence to overpower challenging environmental factors that may impact learning for their students. These teachers believe they personally have the skills, training, and confidence to help a child learn and have high achievement (this is labelled personal Teaching Efficacy-PTE as it is specific to the individual rather than a belief about teachers as a profession in general). Future studies over the next year completed by the RAND organization continued to find correlates of efficacy including student achievement, teacher stress, and implementing intervention strategies. In fact,
the construct of teacher efficacy was such a huge innovation, it secured the continuation of RAND funded research projects.

The creation of the teacher efficacy construct created a spark in the field of teacher research and one by one, several efficacy measures were developed to build upon the two RAND items discussed above. Tschannen-Moran et al. (1998) provide a summary of these measures as well as the many measurement challenges among researchers in trying to create instruments of teacher efficacy that reflect Bandura’s conceptualization of self-efficacy.

**Measurement of teacher efficacy and its challenges**

Due to the excitement of findings from the RAND studies, many researchers began working on more lengthy questionnaires to build upon Bandura’s conceptual framework. In the early 1980s, Gibson and Dembo (1984) created a more extensive questionnaire to measure teacher efficacy based on the theoretical underpinnings of Bandura’s self-efficacy theory. Their 30-item survey found results to support the two dimensions of teacher efficacy: *generalized efficacy* and *personal efficacy*; (Gibson & Dembo, 1984) which also included the two items listed above in the RAND study. *Personalized efficacy* is the expectation the individual teacher has the skills to carry out the expected actions to yield a desired outcome which the researchers assumed fit onto Bandura’s concept of *self-efficacy expectancy*. *Generalized efficacy* on the other hand, measures efficacy as a collective teacher efficacy as a profession and how much influence it has on student’s learning (noting if there are factors they feel are beyond their control), which the researchers assumed reflected Bandura’s *outcome expectancy* (Gibson & Dembo, 1984, p. 570). This instrument became popular and was widely used by researchers to measure teacher-efficacy and its impact on various factors such as student achievement (personalized efficacy) and to the school structure and climate (generalized efficacy).
Many researchers using the Gibson and Dembo items were able to confirm the two factors existed (see Tschannen-Moran & Woolfolk Hoy, 2001), and in fact, studies examining both preservice and in-service teachers found 18% to 30% of the variance between teachers’ efficacy scores to be explained by the two efficacy factors (personal and generalized). The instrument was used frequently to examine teacher efficacy and its impact on students’ achievement, and on the teachers’ own attitudes and beliefs toward teaching. In their review on the research using Gibson and Dembo’s instrument, Tschannen-Moran et al. (1998) show that the instrument was able to illustrate teacher efficacy was linked to teacher behaviour such as the amount of effort and perseverance a teacher would put forth in challenging situations. In addition, with the use of this instrument, it was discovered that teachers with higher efficacy were also more likely to support a child instead of criticizing their wrong answer and also put forth more effort with a student who was failing in a particular task. Other research has showed a link between high teacher efficacy and willingness to try new instructional methods, to explore other ways of teaching, willingness to work with challenging students instead of referring them to special education, believing the student belonged in the regular classroom, and even enthusiasm for teaching (see Tschannen-Moran et al., 1998 for a review).

Despite the wide use of Gibson and Dembo’s scale, criticisms began to emerge on its use of personal and generalized efficacy. Hoy and Woolfolk (1990) for example, argued combining the two factors into a single measure of teacher efficacy is misleading as they have shown to have a weak positive correlation. In addition, the authors describe that even when the two scales are used, it tended to provide a more global picture of teacher efficacy rather than context specific (i.e., only showed generalized efficacy) (Hoy & Woolfolk, 1990). Factor analysis showed many items on their instrument loaded on both factors. This discovery led to many
researchers using shortened versions of the original 30 item questionnaire to measure only one factor (personalized or generalized), however, the same issues of items loading on both factors were witnessed. Even when using more narrow parts of the questionnaire, for example, using only 5 items to measure personalized efficacy and 5 to measure generalized efficacy, the same issues were seen in that items loaded onto each other, and some did not load onto either factor (Tschannen-Moran & Woolfolk Hoy, 2001, p 789). In his review of teacher-efficacy measurement, Klassen (2011) highlights that studies have shown teachers’ generalized efficacy (sometimes referred to as collective efficacy), and personal efficacy to be related. It is hypothesized that collective efficacy beliefs stem from the sources of teachers’ own personal efficacy (e.g., past experience, vicarious experience, verbal persuasion, and group level physiological experiences). (Klassen, 2011, p. 3).

The shortcomings of Gibson and Dembo’s instrument was problematic for the measurement of teacher efficacy. As Henson et al. (2002) presented, because the scale showed a more generalized teacher efficacy factor, it focused more on the external factors that influenced student outcomes (e.g., “the amount a student can learn is primarily related to family background”) rather than on the specific teachers’ confidence about their ability to influence these factors. In 2001, there was a shift and a call in the literature to revisit Bandura’s (1977) self-efficacy theory and measure teacher efficacy based on Bandura’s conceptualization of self and collective efficacy. This focus ensured teacher efficacy measured the ability of both individual teachers and the collective profession of teachers to create a desired outcome and not the focus on the external factors impacting student outcomes (Tschannen-Moran & Woolfolk Hoy, 2001).
Another measurement challenge of teacher efficacy was understanding how much specificity was required when measuring the efficacy in particular contexts and subject-matter. Researchers agreed teacher efficacy was situation specific, but determining this level of specificity to ensure it still had predictive value was challenging (i.e., ensuring the domain was not so specific that it only predicts success in that one small area such as teaching multiplication) (Tschannen-Moran et al., p. 201). Researchers adapted the Gibson and Dembo (1984) instrument to examine specific curriculum areas such as science and chemistry (Riggs & Enochs, 1990), classroom management which examined efficacy for classroom management and discipline with children who have behavioural challenges, external influences, and personal teaching efficacy (Emmer, 1990 as cited in Tschannen-Moran & Woolfolk-Hoy, 2001), and special education (Meijer & Foster, 1998).

With this new goal among researchers, Tschannen-Moran, Woolfolk-Hoy (2001) also created a new instrument called the “Ohio State Teacher Efficacy Scale (OSTES). Through three different studies to research the psychometric properties of the items, the final instrument had both a long version (24 items) and a short (12 items). The instruments have three factors for capturing teacher efficacy: efficacy for instructional strategies, efficacy for classroom management, and efficacy for student engagement. Overall, the OSTES proved to have strong construct validity and to be a reliable measure of teacher efficacy. In addition, this instrument added measurements of teacher efficacy for assessing teacher efficacy for a range of teaching tasks rather than only measuring how teachers manage with student difficulties and unsupportive environment as past instruments measured.

To summarize the literature on teacher-efficacy so far, teachers’ self-efficacy influences the environment they create for their students and the judgements about the specific tasks they
are willing to engage in. Teacher efficacy has been shown to be related to student achievement outcomes (Armor et al., 1967; Ross, 1992) and even students’ own sense of efficacy (Anderson et al., 1988 as cited in Tschannen-Moran & Woolfolk Hoy, 2001). Furthermore, teachers’ efficacy beliefs relate to their own behaviour in the classroom. They put forth more effort into teaching and set more which in turn, elicit more planning and organization in those with high levels of efficacy (Allinder, 1994). Teachers with high efficacy also persist longer with a challenging student (Ashton & Webb, 1986), and are even less likely to send a student to special education services (Meijer & Foster, 1988). Aligning these findings to Bandura’s (1977) self-efficacy theory, it can be said teachers with high efficacy perceive themselves able to engage in the actions required to accomplish a desired outcome.

In today’s classrooms across Canada, inclusive practice is implemented to ensure every child is included and receiving the appropriate care and instruction to meet their learning needs. Despite their learning challenges and diversities, they are welcomed into their neighborhood school and mainstream classrooms (Inclusion BC, 2012). More current research has been interested in further investigating the link between teacher efficacy and inclusive practice, given that nation-wide, inclusion practices are to be the norm. The next section highlights the current state of teacher efficacy measurement and theory with respect to inclusive practice.

**Teacher Efficacy and Inclusive Practice**

In the context of inclusive education, where all students are in the general education classroom, it is vital to have teachers with high efficacy. This is important because as stated, those with higher efficacy will persist longer with challenging students, be willing to try new instructional methods, and are less likely to refer a student to a special education classroom. On
the other hand, teachers with low efficacy trying to implement inclusive practices may decide there is nothing they can do to help a challenging student.

The instruments discussed thus far in the literature measure teacher efficacy in more general areas of teacher practice (e.g., the Gibson & Dembo, 1984 instrument) and those that have measured teacher efficacy specifically for using inclusive education strategies have focused on a conceptualization of disability that is viewed from a medical standpoint. This conceptualization looks at a child with a disability as having fixed attributes that cannot be changed and thus puts blame on the child. These scales have sound reliability and validity, however, they view children from a deficit perspective (e.g., Hutzler et al., 2005). A deficit perspective does not allow for the belief that there can be influence by an efficacious teacher to help build skills in a student with learning challenges. Teachers who instead work from a social model, believe the use of inclusive strategies can be used to build skills in a child rather than being focused on the diagnosis (medical model). Thus, due to the conceptual constraints of inclusive practice and knowing inclusive practices are context specific, a new instrument was needed in the literature to examine teacher efficacy for inclusive practices specifically. Sharma et al. (2012) created an instrument that successfully tackled the aforementioned challenges of measuring teacher efficacy.

Sharma et al. (2012) created the Teacher Efficacy for Inclusive Practices scale (TEIP) which included three subscales: Collaboration, Managing Behaviour, and Inclusive Instruction. The three factors were developed based on knowledge of past instruments used (Gibson & Dembo, 1984; Tschannen-Moran et al., 1998; Woolfolk Hoy & Spero, 2005) as well as reviewing literature on inclusive practice. The literature suggests there are three areas of expertise required for effective inclusive practice. They influence knowledge of content and
pedagogy (selecting instructional goals, knowing their students, adapting lesson plans), managing the classroom environment and behaviour (creating an environment that prevents behaviour problems), and lastly, working collaboratively (with both parents and professionals) (see Sharma et al., 2012, p. 14 for this review). After analysis, the final scale consisted of 18 items. Factor 1, called *Inclusive Instruction*, included 6 items, accounting for 25.45% of the variance, the second called, *Collaboration* included 6 items and accounted for 19.8% of the variance. Lastly, *Managing Behaviour*, had 6 items accounted for 19% of the variance. All factors have strong reliabilities; alpha coefficients of the three factors was 0.93, 0.85, and 0.85 respectively (Sharma et al., 2012).

Researchers in the field of education have utilized the TEIP in samples of preservice and in-service teachers to examine the link between teacher efficacy and inclusive practice in various samples. These include comparing in-service teacher’s efficacy with efficacy attitudes toward inclusion (Savolainen et al., 2012), comparing TEIP cross-culturally (Loreman et al., 2013), examining Canadian preservice teachers TEIP scores with demographic variables and beliefs toward inclusion (Peebles & Mendaglio, 2014; Specht et al., 2016;) and examining how demographic variables predict TEIP scores (Specht & Metsala, 2018) (see Chapter 3 for a full literature review of teacher efficacy studies).

**Chapter Summary**

No studies to date have utilized the TEIP longitudinally specifically from preservice to in-service, which was the aim of the current thesis. Sharma et al., (2012) also stated a limitation to their TEIP study that no qualitative measures were used. They recommend future studies to incorporate qualitative data in conjunction with the TEIP to better understand efficacy development and the factors that strengthen or weaken efficacy levels. Even Bandura back in
1977 recommended using both quantitative and qualitative data when measuring efficacy to better understand the influences of efficacy in various scenarios given it is a domain specific construct. Thus, the current thesis had two research aims. The first was to measure the change in teacher efficacy from preservice to in-service (study 1) and to better understand the experiences and factors influencing efficacy (study 2) through two interviews. Turn next to Chapter 3 for a review of the literature measuring teacher efficacy.
Chapter 3: Literature Review

This chapter outlines the relevant research studies that have investigated the construct of teacher efficacy. First, the landscape of Canadian classrooms is discussed followed by an introduction to the framework of inclusion and teachers’ preparedness to implement inclusion practices. Next, the known variables that influence teacher efficacy levels are highlighted including teacher beliefs, teacher education programs (coursework and practicums), and demographic variables. Next, research studies that have investigated teacher efficacy in preservice and in-service teachers using longitudinal and cross-sectional methods are presented. Lastly, studies that have specifically measured teacher efficacy for inclusive education using the TEIP are discussed.

Current Landscape of Canadian Classrooms

Today, both mental health and learning challenges (collectively referred to as diversities throughout this dissertation) are on the rise in children. In North America, one in every five youth (ages 13-18 years) will experience a mental health concern such as depression, anxiety, attention-deficit hyperactivity disorder, and / or conduct problems (Merikangas et al., 2010); however, further research has indicated that many youth “fly under the radar” and rates of anxiety and depression are severely underestimated (Flett et al., 2018 as cited in Leschied et al., 2018, p. 359-362). Interestingly, 50 percent of mental health disorders shown in adolescents had their onset by age 6 for anxiety disorders, by age 11 for behavioural disorders, 13 years for mood disorders, and 15 years for substance abuse disorders (Merikangas et al., 2010). Similarly, rates of children with special education needs in Canada is an estimated 9-15 percent (Canadian Council on Learning, 2009) and a 2017 Canadian survey on disability showed the top two prevalent disabilities among youth ages 15-24 years was mental health-related (7.8 percent) and
the second was learning disabilities (5.5 percent) (Statistics Canada, 2017). Given these statistics, numbers translate into an expectation that teachers will, on average, have a range of 2-5 students in their classroom who have been identified as having special learning needs.

Given that are many types of disabilities in Canadian students; including mental health, learning disabilities, and physical disabilities, school boards across the country systematically organize these diversities using a categorical system. Each province has slightly different names or variations of categories. In Ontario for example, the education system uses four main categories. One is called communication which includes a list of diagnoses and disabilities that influences the child to acquire information at school to learn efficiently. Some examples of diversities in this category include: Autism, speech impairment, language impairment, deaf and hard of hearing, as well as learning disabilities. Notably, approximately 40% of children in Ontario who fall into this category have learning disabilities (LDAO, 2015-2016). A second category is called Intellectual including Developmental disability, mild intellectual disability, and giftedness. The Behavioural category includes a learning disorder characterized by specific behaviour that is chronic enough in its intensity and duration and affects learning. This can include children with mental health diagnoses or another type of challenge that impedes on a child’s ability to build and maintain interpersonal relationships. Lastly, the Physical disabilities category includes blindness and low vision as well as having a physical disability (Ministry of Education, 2017 p. 14-16).

To ensure every child is included and receiving proper education, the framework of inclusion is used in Canada which ensures every child of every ability has the right to be in the general education classroom (Inclusion BC, 2012). This has placed Canadian teachers in a position to not only demonstrate a series of skills to provide the behavioural management and
instructional methods to adapt to the various learning needs of each child, but also the resources and endurance to do so.

**Inclusion Framework**

Inclusion is a framework implemented in schools worldwide, including Canada, in which all students of every background and ability are taught at their neighborhood school, in their age-appropriate regular classroom, and encouraged and welcomed to participate in all aspects of the school’s culture and activities (Inclusion BC, 2012). In Canada, using inclusion as a framework to teach *all* children is a protected right given the existence of the *Canadian Charter of Rights and Freedoms* which defines *equity* for all people in society. Inclusion demands equity for all students regardless of any (dis)ability, race, gender, or other status (Hutchinson & Specht, 2020). Inclusion should not only include students with disabilities, but should welcome them and all aspects of school that typical children enjoy and should be available to those who have some type of disability or SEN.

Inclusion is implemented to meet new education expectations as laid out by the government. For instance, the *Convention on the Right of Persons with Disabilities Act (CRPD)* is an international treaty declared by the United Nations which promotes and protects the human rights of all individuals with disabilities. This act has shifted society’s view of disability from a social welfare problem to a basic human rights issue (Carr, 2016, p. 9). Because of this shift in view, it is recognized that society’s barriers and prejudices toward those with disabilities is debilitating. In 2010, Canada ratified and implemented this convention in all provinces and territories, meaning that each province and territory is now responsible for espousing legislation that promotes the well-being of those with various disabilities as well as revoking any that are
discriminatory. Hence, Canada’s adoption of inclusion legislation promotes well-being for our children’s SEN and reduces barriers to resources they require.

The use of inclusion practices benefit students more than segregated classrooms and thus, children with disabilities around the world benefit by being in the regular classroom compared to matched children that had the same level of disability who were placed in segregated classrooms. In his article reviewing from the “why” of inclusion to “how” to implement it, Loreman (2007) outlines the findings from many years of research, all of which show inclusive education to have social, academic, and financial benefits. In addition, there are moral, ethical, and social justice issues with segregation in the literature which has made the use of any other method other than inclusion hard to justify. Loreman (2007) goes on to cite research stating there is no evidence, and there never has been evidence showing that segregation is beneficial for students who have SEN (e.g., Sobsey, 2005 as cited in Loreman, 2007). Timmons and Wagner (2008) found through parent reports that children with disabilities who are placed in “high inclusion” classrooms (i.e., using effective and evidence-based strategies and instruction) report their children to have better health overall, progress well or very well at school, socialize and cooperate well or very well with other children at school, and look forward to going to school more often than those in mid-range or lower inclusion settings. These results were shown despite the type of disability and its severity.

Reviews on inclusive education show inclusion to be encouraging in that most studies report positive outcomes or neutral outcomes (no differences) in student achievement outcomes based on inclusion methods. Parekh (2013) reviewed the literature to investigate the effects of inclusion on various student outcomes. Her review found students in inclusive settings had more positive outcomes and learning than those in control groups, and her review also found that
having students with special learning needs in the general education classroom does not affect the learning of other students in the class. Interestingly, the review also found that schools who congerated children by ability rather than in inclusive settings had worse student performance outcomes and even more, research shows a system that supports inclusion compared to special education models to be cheaper to maintain (Parekh, 2013). Similarly, in his review of over 80 years of research on inclusive education versus segregation, O’Rourke (2015) did not find a single study that showed advantageous academic outcomes for students with learning challenges in segregated compared to inclusive environments.

*Teacher preparedness for inclusive practice*

It is of utmost importance that teachers feel prepared not only in their skills, but in their confidence to carry out the required tasks and policies (such as inclusion) in classrooms around the world. The National Commission on teaching and America’s Future (1996) stated, “New courses, tests, and curriculum reforms can be important starting points, but they are meaningless if teachers cannot use them productively. Policies can improve schools only if the people in them are armed with the knowledge, skills, and supports they need” (p. 5). Clearly, it is critical to ensure teachers feel prepared and supported (i.e., having efficacy) in order to implement inclusive practices.

Despite the vast and consistent research that inclusion is effective for both students with disabilities and typically developing children, teachers themselves struggle to implement inclusive practices for a variety of reasons. The first is that teachers are incredible stressed in taking on such a massive duty. For example, according to the Canadian Teachers Federation, in 2004, the attrition rate was 30 percent within the first five years of their teaching career (Canadian Federation of Teachers, 2004 as cited in Kutsyuruba & Godden, 2014). The most
common reason for quitting being a lack of support from school personnel to aid in helping with the special education needs in the classroom. Likewise, teacher interviews conducted by Gowers et al. (2004) found more than half the teachers in the study to report their stress levels as ‘high’ or ‘very high’ and 41.7% of teachers indicated their confidence levels to be at ‘low’ or ‘moderate’ levels for being able to meet the emotional needs of their students. Furthermore, 80% of teachers stated their job was much more challenging due to having a child with mental health needs in their classroom because they had no training. Even three years into their career, 64% reported still not receiving any training. Those who did receive training indicated it was not sufficient for teaching necessary skills to aid children in the classroom (Gowers, et al., 2004).

Another reason teachers struggle to implement inclusive practices is based on the inadequacies of the education system which in turn also influences teachers’ confidence that they can implement inclusive practices. For example, the way education systems are organized, the method of teaching, the atmosphere in the classroom, feedback given to students, and evaluation methods students receive can all be changed to better meet the child’s needs in an inclusive classroom (UNESCO, 2005). Unfortunately, many of today’s classrooms do not foster these components of the education system. In his review of the “seven pillars” required to support inclusive education, Loreman (2007) expands on the notion that schools struggle with the “how” of implementing inclusive education. He summarized through his research the seven pillars that need to be considered: developing positive attitudes, having supportive policy and leadership, having schools and classrooms processes that are grounded in research, having flexible curriculums and pedagogy, having community involvement, ensuring time for meaningful reflection, and lastly, pillar seven, providing necessary training to teachers and necessary resources.
Thirdly, and of most interest to this research, are teachers’ personal characteristics and their influence on how inclusion is implemented and in particular, the attribute of teacher efficacy. Researchers have become highly interested in studying why some teachers thrive better than others in practicing inclusivity, or in other words, identifying which factors influence the successful implementation of inclusive practices in some teachers and the weak development in others. Specifically, this thesis seeks to better understand how teacher efficacy develops over time from the point teachers are still in their education programs (preservice) to when they enter the workplace (in-service).

It is particularly crucial to understand and observe teachers’ challenges, skill level, and efficacy while in the preservice level in order to create a training program that will ensure success for the teacher and to build efficacy. The term “praxis shock” refers to the incongruity between a teacher’s expectation of what teaching would be like and the reality of what the challenges are (Mark, 1998). This phase is also referred to as being left to “sink or swim” as some participants called it in a study with music teachers (Ballantyne, 2007). When these expectations are crushed in beginning in-service teachers, research suggests teachers focus on survival rather than learning how to manage and teach effectively (Wideen et al., 1998). Mapping Bandura’s (1977) self-efficacy theory to praxis shock, or the idea that beginning teachers are only “surviving” and not in a “mastery” state as Bandura calls it, it would be safe to assume that if one is consistently experiencing praxis shock, then self-efficacy may be consistently reducing. Thus, determining the factors that influence teacher efficacy across the beginning stages (preservice to early in-service years), will help to inform teacher education programs. The following section begins with reviewing teachers’ beliefs toward inclusion, followed by influential factors in Bachelor of Education programs themselves (including
coursework and practicums) and ending with various demographic variables that influence teacher efficacy levels.

**Influences on Teacher efficacy**

Listed below are various factors shown throughout the literature that influence teacher efficacy for general teaching domains as well as for inclusive practice. The factors have been sorted into four categories below. The first addresses teachers’ beliefs toward inclusion. Although beliefs are not explicitly measured in the current thesis, it is important to address it as an influential factor on teacher efficacy levels.

**Beliefs toward inclusion**

For successful inclusion to be implemented, teachers must hold the belief that they are responsible for providing an inclusive classroom. (Jordan et al., 2010). For example, teachers who believe students’ ability to learn is malleable and dynamic as opposed to fixed and unable to grow, tend to have students in their classrooms who achieve better (Jordan et al., 2010). In other words, if a teacher has a belief set that children can learn and be successful if they, as teachers, use specific and effective teaching practices, they are more likely to show high self-efficacy and vice versa. Jordan (2018) highlights how teachers’ beliefs can fall into a “medical model” view whereby teachers posit that children’s abilities are fixed within the child and/or family. On the contrary, the “social model” where belief systems hold the notion that students’ attributes and differences are malleable, subject to change, and are universal.

Specht et al. (2016) identified the relationship between preservice teachers’ demographic variables as well as beliefs and self-efficacy for understanding inclusive practices in the classroom. In their study, 1490 preservice teachers across Canada (who were nearly finished their teacher education program), were surveyed. With respect to beliefs about inclusion using
the Beliefs about Learning and Teaching Questionnaire, (BLTQ) findings revealed: females compared to male educators showed stronger inclusive beliefs; elementary relative to secondary educators had stronger inclusive beliefs; preservice teachers in one-year programs had lower inclusive beliefs compared to those in longer programs; and participants who had a friend with special needs held higher inclusive beliefs compared to those who did not. Similarly, in their study, Specht and Metsala (2018) had 1,026 preservice teachers also complete the Beliefs about Learning and Teaching Questionnaire (BLTQ). Broadly speaking, the study examined which types of demographic variables predicted beliefs differentially. The study found women to have more positive beliefs toward inclusion than men as well as preservice teachers in elementary grades to also have more positive beliefs toward inclusion than those planning to teach secondary grades. Results were discussed as recommendations and considerations in teacher education programs. The authors first suggest having students be aware of gender differences and be shown research to become aware of these differences.

Second, because the authors found the amount of experience with individuals who have exceptionalities in both personal and professional settings as a key contributor to having higher efficacy scores, teacher education programs should include more opportunities for these types of experiences for teacher candidates. Those who believe that ability is more malleable than fixed felt more efficacious in all the domains (Collaboration, Instruction, and Classroom Management) that were looked at for those planning to teach secondary grades. Thus, another suggestion is to teach teacher candidates about student learning and highlight it is indeed malleable in order to ensure teachers are aware they can be in control of students’ learning. It was also found that for elementary teachers, student-centered beliefs predicted efficacy in Collaboration, Instruction, and
Classroom Management. These results may speak to the fact elementary programs focus more on student-centered approaches than secondary.

**Course work in teacher education programs**

In their review of teacher education programs in Canada in 2008, Gambhir et al. discuss the coursework requirements for the completion of a Bachelor of Education program. They indicated that each province and territory is responsible for their teacher education programs and so it is challenging to systematically define teacher education requirements nation-wide. They report that across the country, coursework covers instructional methods for teaching the curriculum, school laws, classroom management strategies, educational psychology, and lastly, professionalism (p. 15). In addition, because Canada’s demographics are changing, there has been a push towards integrating content around inclusive practices into course content. In many programs, it is shown that incorporating inclusion is variable, and in some programs, inclusive courses are elective.

Similarly, a more recent review of Bachelor of Education course requirements, McCrimmon (2015) summarized course work in four of the largest Canadian universities (University of Alberta, The University of British Columbia, University of Toronto, and McGill University) and discovered the majority of programs do not include sufficient courses in topics of childhood disabilities or explicit instruction of inclusive practice. After delving further into the course outlines and descriptions, McCrimmon found that no programs explicitly teach childhood disabilities and exceptionalities (that is learning their descriptions and definitions). He found programs to generally only offer one or two broad courses covering topics of inclusion. For example, he stated the University of Alberta has a single course on psychological issues in the classroom and one course on a very broad topic of inclusive education with respect to
curriculum and practices. Some even showed less exposure to these topics, for example, University of British Columbia had one course about students who have SEN and has zero focus on inclusive education.

On a more positive note, however, a Canadian study by Friesen and Cunning conducted in 2018 measured teachers’ efficacy (as well as other measures) before and after they completed a course on inclusive education that taught inclusive educational practices. Results from the *Teacher Efficacy for Inclusive Practices* (TEIP) (Sharma et al., 2012) scale showed that teachers’ efficacy increased significantly from the beginning to the end of the course across the three types of efficacy measured: efficacy for inclusive practice, for managing behaviour, and for collaboration.

Due to the seemingly scarceness of training in inclusive practices, there has been a call from both teachers and administrative staff to ensure inclusive strategies are taught explicitly to all teacher candidates (Gambhir et al., 2008, p. 15-16). Similarly, when examining learning challenges related to mental health, teacher education courses were found to have insufficient content. In examining courses specific to mental health diversities, Rodger (2014) found that out of 213 teacher education courses across Canada, only two provided content that met the clinician’s requirements for a well-balanced course that teaches *how* teachers can begin to foster resilience for those struggling with mental health in their classrooms. The courses that are offered regarding mental health seem to focus instead on behaviour management and how to implement reward systems to improve students’ motivation.

Teachers in various research studies have attested that course work from their teacher education programs has not properly and adequately prepared them to work with children who have SEN when transitioning from teacher education programs to the work force. Even teachers
who report they feel somewhat confident in teaching those with mental health needs, stated in interviews their biggest need from their teacher programs is to learn additional methods of how to support these children in their classrooms (Alisic et al., 2012). To further illustrate this idea, teacher candidates in the USA were given the *Preservice Teacher Preparation for Inclusion Instrument Survey* (Harvey et al., 2010) to assess demographics, program practices, and expectations for inclusion. Overall, students stated there were introductory courses offered in their programs learning about exceptionalities, special education, and inclusion. Despite being introduced to these topics, respondents rated multiple “areas of need.” In particular, they stated they need to have access to more experience learning about special education and to have faculty gain more awareness of *special education collaboration*, which is the collaboration among general and special education teachers to work together to best meet the needs of students (Harvey et al., 2010).

When interacting with children with Developmental Disabilities (DD), preservice teachers also indicate that teacher education programs do not fully prepare them for this task (Hutchinson et al., 2015). Given the amount of time teacher candidates spend in their teacher education programs, it would be expected that course work would have a stronger influence on self-efficacy for teaching children with DD in inclusive classrooms.

*Practica during teacher education programs.*

Peebles and Mendaglio (2014) showed with a sample of 141 preservice teachers that those who had direct experience working with children who have SEN had increased self-efficacy compared to in-class instruction and using observation methods to learn. Similarly, these results suggest that field experience (i.e., practicum) may be a useful predictor of building teacher-efficacy. Given that more practical-based courses influence teacher efficacy more
significantly than theory-based courses (Lancaster & Bain, 2010), it makes sense that practicum experience plays an extremely vital role in the development of teacher efficacy, and perhaps a larger role than coursework.

Similarly, Young et al. (2018) examined 1490 preservice teachers from 11 Faculties of Education across Canada to better understand how their practicum experiences influenced efficacy. Participants provided self-reported answers to two questions. The first asked about a time they felt they successfully met the needs of a student with an exceptionality during practicum, why they felt that way and what resources helped to meet these needs of the student. The second question asked participants to discuss a situation where they faced challenges meeting the needs of a student with an exceptionality, why it was challenging, and which resources they used to work through the situation. Thematic analysis of all statements found that several factors make preservice teachers feel successful. The first is being able to incorporate behavioural management strategies to their students in order to improve the students’ engagement and participation in class. Second, some preservice teachers felt successful when they were able to improve students’ academic achievement through various means such as giving choices of where to write tests and allowing a student to make up for late assignments due to her challenging home-life. Another factor was building positive student-teacher relationships in order to foster students’ well-being. Positive relationships evolved through taking the time to get to know students and their interests. This action subsequently built trust and opened up conversation to allow the student to approach the teacher for extra help and feel comfortable doing so. When it came to discussing resources that helped build the success, most participants relied on the help of other professionals in the school. The classroom teacher was the most
reported answer as well as educational assistants (EAs) followed by other special resource teachers and principals.

On the other hand, when analyzing the challenges of preservice teachers, similar themes arose in terms of the source of challenge, but the use was different. For example, participants also talked about behavioural management in terms of feeling ill-prepared to address aggressive behaviour, but also other behavioural challenges like being out of one’s chair, inattention, and emotion-regulation. A second factor was teachers feeling they did not meet the academic needs of their students, both those struggling as well as gifted students; some felt ill-prepared by a lack of experience and for others, it was a matter of not having the resources to implement a specific strategy (e.g., knowing a student needed instruction on a computer, but the preservice teacher could not obtain a computer at the school). Forming relationships was also tricky for several participants, particularly at the beginning of the year. Lastly, some preservice teachers felt they did not have the needed support from their associate teachers on practicum for various reasons (e.g., teacher had “given-up” on a challenging student) which left one preservice teacher without any tips of extra support to give the student. It is noted this study captures a “snapshot” of preservice teachers at the end of their teaching program only. The study calls for future research to capture the development across time of these experiences and their influence on efficacy for inclusive practices (Young et al., 2018).

**Demographic variables**

Preservice teacher demographic variables such as gender, experience with teaching children who have SEN, grades taught, and length of teacher education programs have been found to be associated with ratings of preservice teacher efficacy. For instance, Specht et al. (2016) (in a study discussed above) compared preservice teacher-efficacy scores as a function of
their demographic variables and found males reported higher self-efficacy for managing behaviours in the classroom than females. Those who planned to teach elementary grades compared to secondary school showed higher levels of self-efficacy in their ability to collaborate with others. When it came to confidence in managing behaviours, those in one-year programs had significantly lower scores than those in two-year programs. Those in one-year programs also scored significantly lower for confidence in collaboration. Those who had experience teaching students with special needs for more than 30 days showed higher self-efficacy on all three scales (collaboration, managing behaviour, and inclusive instruction) compared to those who had less than 30 days experience. Lastly, participants who had a friend with special needs showed higher scores on all three measures compared to those who did not (Specht et al., 2016).

Similarly, Klassen and Chiu (2010) had 1430 practicing teachers fill-out a survey asking questions about their demographics, self-efficacy, and job satisfaction. With respect to demographics, results showed males to have higher efficacy for classroom management, teachers with more teaching experience had higher efficacy for classroom management than newer teachers, those who taught kindergarten compared to grade 1 or 2 had higher efficacy for classroom management, and those with lower stress levels had higher efficacy (workload stress accounted for 25% of the variance in classroom management self-efficacy).

Hutchinson et al. (2015) studied Canadian preservice teachers’ perspectives on their experience and preparedness to teach children with Developmental Disabilities (DD) in inclusive classrooms. The authors define DDs in their study to include delays in milestones, physical disabilities, sensory impairments, and intellectual disabilities which also includes Autism spectrum disorders. Their study included both quantitative and qualitative data assessing preservice teachers’ experiences, desire for more education, knowledge, advocacy experience,
and self-efficacy. Quantitative results from a self-efficacy questionnaire indicated men compared to women as well as those who reported higher self-competence to report significantly higher self-efficacy for teaching children with DD in inclusive classrooms.

In summary, research has shown the beliefs toward inclusion, the experience gained through teacher education programs from both coursework and practicums, as well as demographic variables all influence teacher efficacy levels. The next section uses this information to highlight how the various influences on teacher efficacy develop across time.

**Teacher Efficacy in Preservice and Beginning Teachers**

The transition from preservice teaching to in-service has been termed as a “praxis shock” due to the incongruity between teachers’ expectations of what teaching would be like and the reality of what the challenges are. These teachers are left feeling overwhelmed and often their teaching methods become ineffective (Wideen et al., 1998 as cited in Ballantyne, 2007). Beginning in-service teachers and even preservice teachers, are at risk for burnout. A review of literature examining burnout has defined burnout in several but similar definitions that include elements of emotional, mental, and physical exhaustion as well as being a result of having excessive demands on one’s energy and resources from working with individuals who require many needs (see Kahill, 1988 for a review). It is important to study both preservice and in-service teachers in order to track and better understand the experiences that influence efficacy levels across these phases. To understand how teacher efficacy changes across time, both longitudinal and cross-sectional studies investigating teacher efficacy in this time period from preservice to in-service are described below.

First, the limited research that has investigated teacher efficacy longitudinally is presented; there have only been two studies completed to date looking specifically at the time
phase between preservice and in-service in a longitudinal method. Next, cross-sectional studies are presented comparing preservice and in-service teacher efficacy scores. Lastly, research discussing not just teacher efficacy, but teacher efficacy for inclusive practice across preservice and in-service phases is described.

**Longitudinal studies**

Hoy and Spero (2005) had 29 preservice teachers fill out three measures of teacher efficacy that resulted in four total efficacy scores. The measures examined teacher efficacy for personalized and generalized efficacy using Gibson and Dembo’s teacher efficacy scale. They also assessed efficacy using Bandura’s teacher self-efficacy scale and lastly, the authors created their own efficacy scale that included items regarding program goals that their instructors indicated they should be able to meet by the end of the program. These three assessments were administered at three time points: at the beginning of their preservice year, at the end of the preservice year, and lastly, at the end of their first teaching year. Results showed teacher efficacy increased significantly on all three measures tracking efficacy over the course of the preservice year and all three dropped significantly during the first year of teaching. The fourth measure that instructors filled out showed no significant change in program goals being met.

Dicke et al. (2015) found contrasting results in their longitudinal study which included 97 beginning teachers in Germany. These authors tracked teacher efficacy for both classroom and stress management and showed teacher efficacy to increase a small amount from the middle of their preservice year to the middle of their first year of teaching (showing no significant drop in the first year of teaching; although they were only tracked until midpoint of the teaching year).

Other longitudinal studies tracking teacher efficacy have been completed, however, they included in-service teachers only. For example, when examining in-service teachers’ efficacy
long-term, Kunsting et al. (2016) found similar results to Dicke et al. (2015) in that efficacy remained quite stable. Their 6-year longitudinal study of German teachers who had already had 3-5 years of in-service experience, found self-efficacy in these experienced teachers to be relatively stable across six years.

Interestingly, however, Klassen and Chiu (2010) found a non-linear relationship between amount of teaching experience (i.e., years of working) in that teacher efficacy increased from 0 to about 23 years of teaching and decreased after the 23 years of experience. This was true for all three teacher efficacy factors measured. As these authors state in their article, the results are contrary to other research examining the developmental course of self-efficacy.

No other longitudinal studies are available looking at teacher efficacy for any outcome measures across the preservice and beginning teaching years. There have been several other studies, however, who have looked at teacher efficacy using cross-sectional methods comparing teacher efficacy scores in preservice with those in-service as well as comparing efficacy levels within each group (e.g., newer in-service to more experienced in-service), these studies are presented next.

**Cross-sectional studies**

Tschannen-Moran and Woolfolk-Hoy (2007) investigated sources of self-efficacy in 255 teachers in the United States to compare differences between beginning teachers (*novice*; with 3 or fewer years of teaching experience) and experienced teachers (*career*; with 4 or more years of teaching experience). The authors found novice teachers to have lower efficacy scores compared to career teachers for the use of instructional strategies and classroom management however, no differences between efficacy for student engagement were found.
Secondly, the authors found career teachers to have significantly more interpersonal support from administration staff and more teaching resources than novice teachers as well as higher satisfaction in their job performance. What was not significantly different between groups was teachers’ perceptions of their support from colleagues, parents, and the community.

Next, exploring the contextual factors related to efficacy, the authors found novice teachers to rely on teaching resources to increase efficacy and career teachers found no contextual variables that made a significant contribution to higher efficacy beliefs. Interestingly, when examining two of Bandura’s sources influencing efficacy (verbal persuasion and mastery), the study found mastery experiences (was assessed by asking about satisfaction of teaching performance this year) which was the strongest contributor to efficacy scores, just as Bandura predicted (1977). 49% of the variance accounted for in novice teachers’ efficacy scores was explained by the mastery experience (rating their satisfaction with their professional performance in the last year) and contextual variables (availability of resources and verbal persuasion supports such as interpersonal support from school staff, parents, and the community), but for career teachers, only 19% of the variance was explained by these factors. Secondly, verbal persuasion (support of colleagues, parents, and members of the community) was also more crucial for novice teachers’ efficacy than career teachers. Specifically, the support of colleagues and the community explained variance in novice teacher efficacy. No verbal persuasion factors influenced career teachers’ efficacy beliefs which indicated by this time in career development, more experienced teachers rely on other sources to build teacher efficacy. These findings are valuable in understanding how Bandura’s sources of efficacy are at play for novice and career teachers, however, the authors recommended that qualitative research be conducted to further
explore the personal experiences of teachers to better understand memories and past experiences that will help inform Bandura’s sources and in particular, examining this longitudinally.

Chan (2008) examined global and domain specific efficacy scores in 273 preservice and in-service teachers in Hong Kong. Teacher efficacy scores were gathered through three instruments; one assessing general teacher efficacy (assessing how they felt in completing general teacher duties), global teacher efficacy (teacher efficacy as a collective profession), and domain-specific efficacy (assessing 6 domain specific scenarios: teaching able learners, classroom management, guidance and counseling, student engagement, accommodating, and teaching for enriched learning). Results showed for domain specific efficacy and global teacher efficacy that in-service teachers had higher efficacy scores than preservice. Additionally, relative to other specific domains, both preservice and in-service teachers had relatively lower scores for classroom management and student engagement.

Wolters and Daugherty (2007) used a cross-sectional design to compare 1024 preservice and beginning teachers from the United States (in first year of teaching). Teachers filled out a demographic questionnaire online asking the grade they teach and years of experience teaching as well as filling out the Teachers Sense of Efficacy Scale (Tschammen-Moran & Woolfolk Hoy, 2001). The authors found teacher efficacy to increase with amount of teaching experience, however the reasons and factors contributing to this increase in efficacy is unknown from the study as no qualitative measures were used. The authors speculated that the increase was due to attrition rates, in that those who leave professions are generally less skilled and confident in their abilities to meet the needs of children who have SEN. They also speculate that over time, teachers gain specific knowledge from course work and that over time more opportunities have arisen to work in challenging situations and difficult students.
In summary, studies comparing teacher efficacy for inclusive practice between in-service and preservice teachers have highlighted that generally, those with more teaching experience had higher levels of efficacy. This was shown when comparing preservice to in-service as well as beginning to more experienced in-service teachers. More experienced teachers also reported having more support from school administration staff and more access to resources. In addition, it also appears novice teachers rely most on mastery experiences for building efficacy compared to in-service teachers.

**Tracking teacher efficacy for inclusive practice**

There have been a handful of studies that have specifically used the TEIP in both preservice and in-service teachers. For example, the TEIP has been used with Canadian preservice teachers (Specht & Metsala, 2018; Specht et al., 2016; Friesen & Cunning, 2018), with a sample of Canadian in-service teachers (Sokal & Sharma, 2014), and in a separate study, both preservice and in-service groups of Canadian teachers (Peebles & Mendaglio, 2014; Sokal & Sharma, 2017). The TEIP has also been used internationally (Chao et al., 2016; Loreman et al., 2013; Malinen et al., 2012; Ozokcu, 2018; Savolainen et al., 2012). None of these studies, however, have used the TEIP longitudinally and specifically, from preservice to in-service practice. Peebles and Mendaglio (2014) is the only known study using the TEIP longitudinally, however, they tracked only preservice teachers across three time points: at the start of their coursework, after coursework, and the third time was after they had their field experience. Thus, there is still question about the longitudinal nature of teacher efficacy for inclusive practice that bridges the preservice to in-service years.

Mintz (2018) is the only longitudinal study following teachers’ efficacy levels across preservice to in-service teachers, however he did not use the TEIP. Mintz investigated if
providing mentorship to teachers would boost teacher efficacy across time. He tracked 67 teachers in England across three time points from the start of their Faculty of Education program to the end of their first teaching year. Contrary to Hoy and Spero (2005), results showed no significant drop in efficacy scores at the end of the first teaching year, with or without having additional support. Teacher efficacy also significantly increased during the preservice year compared to the comparison group (not receiving the intervention). This increased teacher efficacy was also found at the end of the first teaching year in the same group, showing an increase in teacher efficacy over time that is maintained (however, when compared to the comparison group during the first year of teaching, efficacy levels did not differ) suggesting both groups tend to flat line. If this type of intervention is introduced in early years, however, the effects tend to “boost” and stick with teachers. This is important information for teachers who may start teaching programs with low efficacy.

**Current explanation for differences between preservice and in-service teachers**

As discussed, research examining the longitudinal nature of teacher efficacy across the phase of preservice to in-service is limited. Further longitudinal research is warranted to draw both quantitative and qualitative interpretations for why and how efficacy scores change in some phases and not in others. There has been some research trying to answer this question of why teacher efficacy changes in preservice to in-service. For example, it has been documented in the literature that new teachers are more positive about using inclusion compared to those already in the field (Boyle et al., 2013; Gokdere, 2012). This may be because the ideas and teachings of inclusion are fresh in their mind. For example, preservice teachers in the U.S. had positive attitudes toward inclusion as a function of being aware of the most current issues in special education from their program. The results showed that preservice teachers generally rely on what
they are currently learning in their programs as their experience is still limited. Interestingly, in a retrospective study, preservice teachers indicated they had significantly stronger knowledge about disabilities than the in-service teachers, had a stronger belief than in-service teachers that inclusion is positive for children with special education, and also say their programs prepared them to work with children with disabilities. On the contrary, in-service teachers working in the field indicated their programs did not prepare them to effectively use inclusive practices (DeSimone & Parmar, 2006).

In 49 preservice teachers entering practicum, Fives et al. (2007) showed those who were completing their teaching practicum felt more emotionally exhausted at the beginning of their practicum compared to at the end. As they become familiar with both the school environment and their supervisors, their stress reduced. The perceived support from cooperative supervisors also had a positive influence on teacher efficacy for the use of instructional practices in the classroom. The authors posit a rationale for these findings in line with Bandura’s four sources of influencing efficacy. When cooperative teachers use support and guidance (verbal persuasion) this experience then enhances future mastery experiences. This process occurs because student-teachers can teach on their own and create their own strategies (mastery), but also watch the cooperative teacher teach (vicarious experience), receive directive feedback (verbal persuasion) and lastly, through collaboration, the student-teacher can work through the experience, ask questions, and reflect on the positive feelings of the experience to boost efficacy (physiological arousal). As mastery experiences increase, other factors develop to influence burnout and efficacy positively.

Many challenges are also reported in educators who are in the first year of teaching (in-service teachers). For example, in a review examining the transition into teaching, Veenman
(1984) identified from over 100 studies, that many areas of teaching are challenging. The top challenges identified by teachers were: classroom management, disciplining, motivating students, handling individual student differences, relationships with parents, organizing the classroom, inadequate resources, and dealing with the various needs of individual students. More recent literature shows these similar challenges in teachers. Schuck et al. (2018) in one of their interview questions asked early career teachers (in the first three years of teaching) from Australia about their challenges. The question asked, “If you could make any comments about the challenges you face as a teacher, feel free to write about those here.” Responses identified various themes that captured the challenges in these early career teachers which included lack of support from school management, dealing with challenging student behaviours (30 percent talked about some form of classroom management as being a challenge), lack of encouragement and support from colleagues (lack of resource sharing, isolation in lesson development), and lastly, workload and time management were presented as major challenges.

Clearly the progression from being a preservice teacher to in-service teacher changes teachers’ levels of efficacy and occurs for various reasons (e.g., being emotionally exhausted to lacking support from school personnel). It is of interest in this thesis to investigate the change using TEIP data, but also to understand why these changes occur in views toward inclusion principles. Through interviews, the current thesis was also able to investigate the experiences that are prevalent in teacher-efficacy development.

In summary, research examining teacher efficacy longitudinally and using cross-sectional methods from preservice to in-service showed mixed results. For example, Hoy and Spero (2005) found teacher efficacy to increase significantly during the preservice year and drop significantly in the first year of teaching, however, Dicke et al. (2015) did not find a significant
drop in teacher efficacy scores in the first year of teaching. Even in longitudinal studies of in-service teachers found no significant change in efficacy scores, even 6 years into teaching (Kunsting et al., 2016). To try and gather some insight into the development of teacher efficacy, cross-sectional studies were examined comparing preservice and in-service teachers. A summary of these studies found preservice teachers (novice) to have lower efficacy scores compared to in-service teachers (career teachers) for the use of inclusive strategies and classroom management (Tschannen-Moran & Woolfolk-Hoy, 2007). Those studies that did use the TEIP only did so at one time point during preservice (e.g., Specht et al., 2016; Specht & Metsala, 2019) and even a study that used the TEIP in teachers longitudinally did so only in preservice teachers (Peebles & Mendaglio, 2014).

**Present Study Rationale**

There are various factors influencing teacher efficacy including demographic variables such as gender, experience, coursework and practica (Specht et al., 2016, Specht & Metsala, 2018; Young et al., 2018). What remains less clear in the literature, is at what time point in teachers’ career paths these various factors influence teacher efficacy specifically for inclusive practice. From the research that has been conducted on the developmental course of teacher efficacy, using longitudinal studies, there are mixed results. Hoy and Spero (2005) showed efficacy to increase over the preservice year, but significantly drop during the first year of teaching. In their longitudinal studies, Dicke et al. (2015) and Mintz (2019) did not find a significant drop in efficacy scores during the first year of teaching. Furthermore, none of these studies specifically looked at teacher efficacy for inclusive practice. There is recent qualitative research to show several parts of practicum experience influence teacher efficacy levels such as learning to manage behaviours, influencing academic outcomes, building relationships with
students, and working with other professionals. These results illustrate rich data from qualitative interviews for better understanding which practicum experiences influence efficacy, however, these experiences are focused purely on the last year of participant’s teacher education programs (Young et al., 2018). Research is warranted to better understand the development of these experiences longitudinally.

The results of this research will add to the body of literature and knowledge regarding the developmental time course of teacher efficacy for using inclusive practices in a Canadian context. The present study aims to measure teacher efficacy through quantitative and qualitative methods. Bandura’s theory of self-efficacy suggests learning is most malleable during early years of learning (Bandura, 1977) which even further strengthens the need for a longitudinal perspective of how teacher-efficacy develops among Canadian teachers, starting with their initial learning in teacher education programs and ending after teachers have been in the profession for one year.

Bandura (1977) discussed four sources of influence on teacher’s efficacy beliefs. The most influential is mastery experience which derives from the interactions with students while teaching. If these are deemed successful by the teacher, efficacy will increase (efficacy expectancy) and will therefore judge future interactions to be successful (outcome expectancy). Verbal persuasion involves verbal interactions with administrators, colleagues, parents, and members of the community about their performance. Vicarious experiences involve the modeling of someone else and it is important the student identifies with the modeler for the experience to be successful. Lastly, psychological arousal influences the feeling of efficacy. Feeling happiness or pleasure after teaching may increase efficacy whereas high stress and anxiety levels may result in associating that experience with low efficacy beliefs. For less experienced teachers who
may lack mastery experiences tend to draw on the other sources of self-efficacy including vicarious experience, emotional arousal, and verbal persuasion. Preservice teachers to be more malleable in their learning and beginning teachers to be more resistant to change as well as having relatively stable efficacy scores well into their careers. The research presented can be interpreted to suggest efficacy beliefs are most malleable in early learning, just as Bandura suggested. There are mixed results when measuring teacher efficacy at preservice compared to more practiced in-service teachers. Some studies suggest that the difference in efficacy levels are due to a lack of mastery experiences in preservice (Hoy & Spero, 2005; Dicke et al., 2015; Mintz, 2018).

In order to stay true to the conceptual groundwork of Bandura’s self-efficacy theory, it is critical to use statements that reflect capability rather than items that may reflect self-concept or self-worth (Klassen et al., 2011) as well as to ensure teacher-efficacy is measured as a domain-specific construct. Thus, the TEIP was used to capture both of these previously noted challenges (Sharma et al., 2012).

Furthermore, to complement quantitative results from the TEIP, interviews were also conducted to gather a qualitative perspective of domain specific experiences. Researchers for over a decade have suggested gathering qualitative data to be the next step in longitudinal research examining teacher efficacy (Tschannen-Moran & Woolfolk Hoy, 2007) and even Bandura in 1977 discussed the importance of qualitative data complementing efficacy scores from instruments to be best practice.

In summary, there is mixed research on the developmental time course of teacher efficacy for the use of inclusive practices as well as a lack of detailed and rich information on the specific experiences influencing this developmental trajectory. For example, other research showed
preservice teachers to be more positive about using inclusive practices than those in the work field, but little is known from the teacher’s perspectives as to why this change in efficacy occurs (Gokdere, 2012). Thus, the current research aims to ask the following two research questions:

1. How does teacher efficacy for inclusive practice change from preservice to in-service? (The TEIP was given at three time points to understand how efficacy develops for classroom management, collaboration, and instruction).

2. What experiences influence teacher efficacy over time? (This research aim was fulfilled through two interviews asking participants an open-ended question about their efficacy).

Outline of Research Studies

The current thesis includes two separate studies to address the two research questions, respectively. The first study (Study 1) examines quantitative data in a sample of Canadian teachers from their preservice years into the first year of teaching across three time points. This study is found in chapter four. In the subsequent chapter, chapter 5, results of Study 2 are presented which involved qualitative data from participant interviews. See Figure 2. for a visual overview of Study 1 and 2.

<table>
<thead>
<tr>
<th>Data Collection Timeline</th>
<th>Time 1 - In first year of teaching program</th>
<th>Time 2 - In second year of teaching program</th>
<th>Time 3 - In first year of teaching program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1 - TEIP Data (quantitative)</td>
<td>• Collected in person</td>
<td>• Collected online</td>
<td>• Collected online</td>
</tr>
<tr>
<td>Study 2 - Interviews (qualitative)</td>
<td>• No interview</td>
<td>• First interview via telephone</td>
<td>• Second interview via telephone</td>
</tr>
</tbody>
</table>

Figure 2. Summary of Data Collection Timeline Across Study 1 and Study 2.
Chapter 4: Study 1

This chapter reports the method and results of Study 1 followed by a brief discussion. First, participants’ demographics are described, the materials used, and the procedure of data collection is described. Next, results of the TEIP instrument are reported and organized by each of its three subscales: Collaboration, Managing Behaviour, and Inclusive Instruction, respectively. Lastly, the chapter ends with a discussion of the results.

Method

Participants

Of the 1550 participants who initially agreed to complete the questionnaire, 60 participants did so across all three points in time. Thus, these 60 participants are those involved in study 1. These 60 participants were followed longitudinally from the beginning of their initial teacher education program through to the time they were one year into their working careers as teachers as either full time teachers or Long Term Occasional (LTO) teachers.

Participants were from 11 different Faculties of Education across Canada covering two Faculties in British Columbia, one in Saskatchewan, five in Ontario, one in Alberta, and two from Nova Scotia. All participants were enrolled in a post degree program in a Faculty of Education. The participants ranged in age from 24 to 41 years old ($M = 30.7$ years old, $SD = 6.16$) at the initial data collection in 2015 with the final collection taking place 3 years later in 2018. While filling out ethnicity, some participants endorsed multiple ethnicities resulting in percentages adding up to more than 100%. With that said, 1.66 percent of individuals identified as Aboriginal, 1.66 percent East Asian, 3.33 percent South East Asian, 90 percent as White, 3.33 percent as French Canadian, 1.66 percent Black, and 3.33 percent identified as bi-racial. The sample identified as 16.7 percent male and 83.3 percent female.
There was almost an even divide between number of teachers teaching elementary and secondary school grades. 43.3 percent of the participants indicated they will be teaching elementary school grades (Kindergarten to grade 6) upon graduating and 41.7 percent planned to teach Secondary school grades (grade 9-12). The other 15 percent were teachers who indicated they will be teaching both elementary and secondary grades. After their first year of teaching, 35 percent of participants indicated they were an occasional teacher and 43 percent reported they had a teaching contract. The remaining 22 percent did not endorse either of these positions. This may indicate they not working in the field. 11.6 percent reported a Master’s Degree to be their highest level of education and the remaining respondents indicated that a Bachelor’s Degree (or equivalent) was their highest level of education. In terms of exposure to individuals with diversities, only 3.3% of the participants reported knowing no one with an exceptionality.

In terms of amount of experience participants had entering their Faculty of Education program (Time 1) working with those who have SEN, 50 percent of participants indicated they had little to no professional experience and 50 percent indicated they had moderate to extensive experience. In terms of personal experience working with those who have SEN, 45 percent indicated they had little to no experience and 55 percent indicated they have moderate to extensive experience.
Materials

Participants were given a letter of information and a consent form (See Appendix A). They also filled out a form asking demographic information (see Appendix B). Demographic variables included sex, grade taught, teaching experience, and personal and professional experience with those who have SEN. These variables have been shown to influence efficacy levels in preservice teachers (Specht et al., 2016; Specht & Metsala, 2018). Thus, given participants started this research study at the beginning of their teaching program, it was important to understand how these variables influence efficacy levels in the program and beyond when working in-service.

Participants also completed the Teacher Efficacy for Inclusive Practices questionnaire (TEIP, see Sharma et al., 2012. The TEIP contains 18 questions on a 6-point Likert scale ranging from strongly disagree to strongly agree and was used to measure teacher’s efficacy for carrying out three domains of inclusive practice. The first is using Inclusive Instruction which denotes one’s perceived ability to use teaching strategies that are inclusive for every child (e.g., “I am confident in designing learning tasks so that the individual needs of students with disabilities are accommodated”). The second subscale measures perceived efficacy for Collaboration, or feeling one has efficacy to work with parents of children in their classrooms and other professionals in the field, (e.g., “I can assist families in helping their children do well in school”). Lastly, the TEIP measures self-efficacy for one’s perceived ability to Manage Behavior in the classroom (e.g., “I am able to get children to follow classroom rules”). (See Appendix C for the full TEIP scale). Sharma et al. (2012) determined the scale to have high very high internal consistency. Cronbach’s alpha for each scale was .93, .85, and .85 respectively.
Procedure

Data was collected from participants at roughly the same time points at each Faculty of Education over the course of three years.

At Time 1, preservice teachers were in the beginning of their program. A research assistant came into each of the teacher education class at Faculty of Education programs. Preservice teachers were asked if they would like to participate in the research study. Those who agreed, completed a consent form and subsequently filled out a separate sheet to gather demographic information (see Appendices B, C, and D). At this time, participants also filled out the *Teacher Efficacy for Inclusive Practices* (TEIP) questionnaire (Sharma et al., 2012) (see Appendix A).

At Time 2, preservice teachers were contacted again via email (emails retained from the consent forms participants filled out at Time 1). This contact took place approximately one year after Time 1 data collection while participants were near the end of their program. It is important to note participants were contacted at this point because by this time they had completed their course work (including having a course about inclusive education) as well as have completed, or in the midst of completing, at least one practicum placement. At this time, participants once again completed the TEIP, however, this time it was completed online using *Qualtrics*. Participants were emailed with instructions on how to fill out the questionnaire. Similar to Time 1, participants also filled out a separate sheet to briefly gather demographic information to track changes in amount of teaching experience they gathered working with individuals who have learning challenges.

At Time 3, participants were contacted approximately one year later from Time 2. At this time, participants had graduated from their Faculty of Education programs and were working in
their field in some capacity. The exact same process as at time 2 took place in that participants once again filled out the TEIP and the demographic questionnaire online using Qualtrics.

**Results**

**Overall Analysis**

A one-way repeated measures multivariate analysis of variance (MANOVA) was first performed to test if there were any differences in participants’ scores between the three TEIP subscales from Time 1 to Time 2 to Time 3. Results of the MANOVA were significant, Wilk’s $\Lambda = .881$, partial $\eta^2 = .061$, $F(6,232) = 2.526$, $p = .022$. Univariate analyses investigated each subscale separately. A one-way repeated measures ANOVA for Collaboration was not significant $F(2,118) = 1.55$, $p = .217$, $\eta^2 = .026$. The one-way repeated measures ANOVA for Managing Behaviour was significant, $F(2, 118) = 4.05$, $p = .020$, $\eta^2 = .064$. Pairwise comparisons show a significant increase in scores from Time 1 ($M = 4.103$, $SD = .661$) to Time 2 ($M = 4.322$, $SD = .587$) ($p = .014$), however, differences between Time 1 and 3 ($M = 4.163$, $SD = .723$) were not significant ($p>.05$). Similarly, differences between Time 2 and 3 were not significant ($p>.05$). A one-way repeated measures ANOVA with for Inclusive Instruction was significant, $F(2, 118) = 4.61$, $p = .012$ partial $\eta^2 = .072$. Pairwise comparisons show a significant difference in scores from Time 1 ($M = 4.54$, $SD = .585$) to Time 2 ($M = 4.79$, $SD = .458$) ($p=.016$). Differences between Time 1 and Time 3 ($M= 4.636$, $SD = .50$) were not significant, ($p>.05$). Similarly, the difference between Time 2 and Time 3 was not significant ($p>.05$).

In summary, Collaboration scores (See Table 1 for Descriptive Statistics) did not significantly change over time, whereas both Managing Behaviour (Table 2) and inclusive instruction (Table 3) showed significant increases between Time 1 and Time 2.
Given that the analyses for main effect of time have already been reported in the above analyses, only the main effects for the demographic variable and interaction terms will be presented below. To analyze if any of these demographic variables contributed to efficacy differences, separate two-way analysis of variance (ANOVAS) were run for each of the demographic variables. The independent variables were Time and the given demographic variable. The dependent variables used were efficacy ratings on Collaboration, Managing Behaviour, and Inclusive Instruction, respectively (See Tables 1, 2, and 3 for an overview of means and standard deviations on these dependent measures for each demographic variable).

In addition, unless otherwise stated, all testing assumptions have been met for each analysis. It is also important to note that for the demographic variables that measures experience (personal and professional) as well as teaching experience use classification was based on data gathered at Time 1. The purpose of using only Time 1 data for these variables is to investigate if and how the amount of experience coming into the program has influence on efficacy levels over time. In addition, as time increases in the program, participants will be gaining similar experience through their practicums and coursework, thus, experience at Time 2 and 3 will not have many differences to measure.
Collaboration

Table 1. TEIP Descriptive Statistics: Collaboration

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<th>Variable</th>
<th>Time 1</th>
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</table>

Note. Participants filled out the TEIP which is a 6 point Likert scale ranging from strongly disagree to strongly agree.

Sex differences.

Differences between men and women’s Collaboration scores across time using a 3 (time) x 2 (gender) repeated ANOVA revealed no main effect of gender, \( F(1, 58) = 1.46, p = .232, \eta^2 = .024 \), and no interaction between time and gender was found, \( F(2, 116) = .980, p = .378, \eta^2 = .017 \).
Grade intended to teach.

Data was analyzed using a 3 (time) x 2 (grade taught) repeated ANOVA. Mauchly’s test indicated that the assumption of sphericity had been violated ($\chi^2 (2) = 6.28, p = .043$), therefore, degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity. The ANOVA showed no main effect of time, $F (1.78, 87.30) = 2.16, p = .127, \eta^2 = .042$, even with the correction. There was, however, a main effect of grade taught, $F (1, 49) = 10.98, p = .002, \eta^2 = .183$. Those teaching elementary grades have higher mean scores across the three time points than those teaching secondary grades. There was no significant interaction between time and grade taught, $F (1.78, 87.30) = .508, p = .603, \eta^2 = .010$.

Experience teaching students with SEN.

To track the development of efficacy over time based and the amount of teaching experience’s influence on this efficacy, a 3 (time) x 3 (Experience) repeated ANOVA was run. The ANOVA no main effect of amount of experience teaching students with special needs, $F (2, 57) = .303, p = .740, \eta^2 = .011$ and no interaction between time and amount of experience teaching students with special needs, $F (4, 114) = .414, p = .798, \eta^2 = .014$.

Personal and professional experience with students who have SEN.

A 3 (time) x 2 (Personal Experience) repeated ANOVA showed no effect of personal experience, $F (1, 58) = .025, p = .875, \eta^2 = .000$ and no interaction between time and amount of personal experience, $F (2, 116) = 2.060, p = .132, \eta^2 = .034$.

A 3 (time) x 2 (Professional Experience) repeated ANOVA showed no main effect of professional experience, $F (1, 58) = 3.165, p = .080, \eta^2 = .052$, and lastly, no interaction between time and professional experience, $F (2, 116) = 2.78, p = .066, \eta^2 = .046$. 
With respect to Collaboration, the only significant findings were between grade taught and efficacy scores; participants teaching Elementary grades had significantly higher Collaboration scores compared to those teaching Secondary.

**Managing Behaviour**

Table 2. TEIP Descriptive Statistics: Managing Behaviour

<table>
<thead>
<tr>
<th>Variable</th>
<th>Time 1</th>
<th></th>
<th></th>
<th>Time 2</th>
<th></th>
<th></th>
<th>Time 3</th>
<th></th>
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<td>4.15</td>
<td>.727</td>
<td>50</td>
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<tr>
<td>Grade Taught</td>
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<td></td>
<td></td>
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<tr>
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<td>26</td>
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<td></td>
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<tr>
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<td>.605</td>
<td>18</td>
<td>4.20</td>
<td>.727</td>
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</tr>
<tr>
<td>Personal</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None to Little</td>
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<td>27</td>
<td>4.27</td>
<td>.568</td>
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<tr>
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<td>4.16</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>None to Little</td>
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<td>.470</td>
<td>30</td>
<td>4.11</td>
<td>.570</td>
<td>30</td>
<td>3.93</td>
<td>.767</td>
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<tr>
<td>Moderate to Extensive</td>
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<td>.706</td>
<td>30</td>
<td>4.53</td>
<td>.535</td>
<td>30</td>
<td>4.40</td>
<td>.601</td>
<td>30</td>
</tr>
</tbody>
</table>

*Note. Participants filled out the TEIP which is a 6 point Likert scale ranging from strongly disagree to strongly agree.*
Sex differences.

Differences between men and women’s Managing Behaviour scores across time using a 3 (time) x 2 (gender) repeated ANOVA no main effect of gender, $F(1, 58) = .414, p = .522, \eta^2 = .007$, and no interaction between time and gender was found, $F(2, 116) = .089, p = .915, \eta^2 = .002$.

Grade intended to teach.

A 3 (time) x 2 (grade taught) repeated ANOVA no main effect found for grade taught, $F(1, 49) = 2.70, p = .107$, partial $\eta^2 = .052$ and no significant interaction between time and grade taught, $F(2, 98) = .119, p = .888$, partial $\eta^2 = .002$.

Experience teaching students with SEN.

A 3 (time) x 3 (Experience) repeated ANOVA no main effect of experience, $F(2, 57) = .277, p = .759$, partial $\eta^2 = .010$ and no significant interaction, $F(4, 114) = 1.36, p = .252, \eta^2 = .070$.

Personal and professional experience with students who have SE.

A 3 (time) x 2 (Personal Experience) repeated ANOVA showed no main effect for personal experience, $F(1, 58) = .578, p = .450, \eta^2 = .010$ and no interaction between time and amount of personal experience was found, $F(2, 116) = 1.23, p = .297, \eta^2 = .021$.

A 3 (time) x 2 (Professional Experience) repeated ANOVA showed a main effect of professional experience, $F(1, 58) = 14.23, p < .001, \eta^2 = .197$ such that those with moderate to extensive professional experience had higher efficacy scores than those with no to little experience. There was no significant interaction between time and professional experience, $F(2, 116) = .456, p = .635, \eta^2 = .008$. 
With respect to Managing Behaviour, the demographic variable of professional experience showed significant results in that those with moderate to extensive professional experience with those who have SEN coming into the program had higher efficacy scores than those with none to little professional experience. In addition, efficacy for Managing Behaviour significantly increased from the beginning to the end of the preservice program (from Time 1 to Time 2).

**Inclusive Instruction**

Table 3. TEIP Descriptive Statistics: Inclusive Instruction

<table>
<thead>
<tr>
<th>Variable</th>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>n</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
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</tr>
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</tr>
<tr>
<td>Female</td>
<td>4.51</td>
<td>.578</td>
<td>50</td>
</tr>
<tr>
<td><strong>Grade Taught</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>4.65</td>
<td>.595</td>
<td>26</td>
</tr>
<tr>
<td><strong>Experience</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Nil</td>
<td>4.55</td>
<td>.481</td>
<td>18</td>
</tr>
<tr>
<td>1-30 Days</td>
<td>4.58</td>
<td>.623</td>
<td>21</td>
</tr>
<tr>
<td>More than 30 Days</td>
<td>4.51</td>
<td>.651</td>
<td>21</td>
</tr>
<tr>
<td><strong>Personal</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>None to Little</td>
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<td>27</td>
</tr>
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<td>Moderate to Extensive</td>
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</tr>
<tr>
<td><strong>Professional</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>None to Little</td>
<td>4.53</td>
<td>.496</td>
<td>30</td>
</tr>
<tr>
<td>Moderate to Extensive</td>
<td>4.56</td>
<td>.671</td>
<td>30</td>
</tr>
</tbody>
</table>
Note. Participants filled out the TEIP which is a 6 point Likert scale ranging from strongly disagree to strongly agree.

Sex differences.

Differences between men and women’s Inclusive Instruction scores across time using a 3 (time) x 2 (gender) repeated ANOVA revealed no main effect of gender, $F(1, 58) = .280, p = .599, \eta^2 = .005$, and no interaction between time and gender was found, $F(2, 116) = .258, p = .080, \eta^2 = .043$.

Grade intended to teach.

A 3 (time) x 2 (grade taught) repeated ANOVA showed no main effect of grade taught, $F(1, 49) = 1.11, p = .297, \eta^2 = .022$ and no significant interaction between time and grade taught, $F(2, 98) = .086, p = .918, \eta^2 = .002$.

Experience teaching students with SEN.

A 3 (time) x 3 (experience) repeated ANOVA showed no main effect of experience, $F(2, 57) = .035, p = .966, \eta^2 = .001$ and no significant interaction, $F(4, 114) = .431, p = .786, \eta^2 = .015$.

Personal and professional experience with students who have SEN.

A 3 (time) x 2 (personal experience) repeated ANOVA showed no main for personal experience, $F(1, 58) = .150, p = .700, \eta^2 = .003$ and no interaction between time and amount of personal experience, $F(2, 116) = .062, p = .940, \eta^2 = .001$.

A 3 (time) x 2 (professional experience) repeated ANOVA showed no main effect of professional experience, $F(1, 58) = 1.95, p = .168, \eta^2 = .033$ and no significant interaction between time and professional experience, $F(2, 116) = .743, p = .478, \eta^2 = .013$. 
With respect to Inclusive Instruction, there were no significant results when examining demographic variables. The results, however, did show a significant increase in overall Inclusive Instruction efficacy scores across time, specifically from the beginning to the end of the preservice program (from Time 1 to Time 2).

In summary, the quantitative data from the TEIP questionnaire showed that for Collaboration, there was no significant change from Time 1 to Time 2 to Time 3. Efficacy scores for both Managing Behaviour and Inclusive Instruction were significantly higher from Time 1 to Time 2 and in both subscales, differences were not significant from Time 1 to Time 3.

There were only a few demographic variables that significantly impacted efficacy scores. For Collaboration, it was found elementary teachers had higher efficacy scores (moderate to extensive amounts) than secondary teachers. Also, those with more personal and professional experience with students who have SEN compared to those with lower amounts (none to little) had higher Collaboration scores. When measuring efficacy for managing behaviour, results showed those with extensive to moderate levels of professional experience with students who have SEN had higher efficacy scores from the beginning to the end of their preservice program. Lastly, no demographic variables were found to significantly impact inclusive instruction scores.

**Discussion**

Due to the limited research in the field examining teacher efficacy and inclusive practices, the current results are discussed in comparison with a few of the studies who have measured teacher efficacy using the TEIP. As noted earlier, there have been no longitudinal studies using the TEIP across preservice to in-service, meaning the discussion below compares current longitudinal results to longitudinal studies examining TEIP results in either preservice
teachers or in-service teachers. Thus, general comparisons can be made from a longitudinal perspective, however, the current results are the first of its kind.

Efficacy scores for Collaboration did not show any increase across time from the beginning of participants’ teaching programs to the end, or even into the first year of teaching. An examination of demographic variables showed significant results for grade taught with elementary teachers having significantly higher Collaboration efficacy scores than secondary teachers. These results are in line with Specht et al. (2016) who also found elementary teachers to have higher Collaboration scores than secondary schools in their sample of Canadian preservice teachers. These results suggest those teaching elementary grades feel more confident in their ability to collaborate with other professionals than those teaching secondary grades.

When examining efficacy scores for Managing Behaviour, scores increased significantly from the beginning of participants’ teaching programs to the end of preservice. This significant increase, however, did not persist longitudinally into in-service. Only one demographic variable which was professional experience, impacted levels of efficacy for Managing Behaviour. Those with moderate to extensive professional experience with students who have SEN coming into the program had higher efficacy scores than those with none to little professional experience. Results regarding demographic variables are contrary to results of preservice teachers’ efficacy scores investigated by Specht et al. (2016) who found men to have significantly higher scores for Managing Behaviour than women. Similarly, research from Klassen and Chiu (2010) also found males to have higher efficacy for classroom management than females, teachers with more teaching experience had higher efficacy for classroom management than newer teachers, and those who taught kindergarten compared to grade 1 or 2 had higher efficacy for classroom management. Results examining efficacy scores for inclusive instruction showed a significant
increase from the beginning of participants’ teaching programs to the end of preservice. This significant increase, however, did not persist longitudinally into in-service. No demographic variables yielded significant results for inclusive instruction efficacy scores.

When examining prior professional and personal experience with students who have SEN, the current study found significant results only for professional experience with respect to behaviour management. Specifically, those who entered the program with moderate to extensive amounts of professional experience being with learners who have SEN had significantly higher efficacy for managing behaviour compared to those who entered the program with none to little professional experience. These results are somewhat consistent with Specht et al. (2016) who also examined experience teaching students with diverse needs and found those with more than 30 days of experience, compared to those with less had higher efficacy scores across all three TEIP scales. The current study’s findings are also somewhat consistent with Peebles and Mendaglio (2014) who found those with more prior experience with students who have SEN had significantly higher efficacy scores than those without prior experience across the three time points.

In summary, the current study did not find efficacy scores on any of the TEIP subscales to increase steadily across all three time points from beginning of teacher education into the work place. It was shown, however, that overall efficacy scores for Managing Behaviour and Inclusive Instruction significantly increased from the start of preservice teaching programs to the end of the program. These results were maintained into the first year of work, even though it was not statistically different from Time 1.

Further conceptualizations of these results with respect to Bandura’s self-efficacy theory could be reflected in his four sources of efficacy. Other research looking at teacher efficacy
found efficacy to be lower at least in preservice compared to those who are more practiced teachers which often levels off after the first year of teaching once more mastery experiences have been gained (Hoy & Spero, 2005; Dicke et al., 2015; Mintz, 2018). Perhaps even after just one year of teacher education, participants were able to gain enough mastery experiences to increase efficacy levels from Time 1 to Time 2, however, as they entered the work place (Time 3), the overwhelming nature of the classroom needs created more novel experiences than mastered ones, which could explain the lack of change in efficacy scores at Time 3. A more in depth discussion of these results along with the qualitative experiences shared in participant interviews are presented in chapter 6.
Chapter 5: Study 2

Participants

Twelve participants were involved in two separate interviews. As a reminder, these 12 participants are a subset from the described participants above from Study 1. Participants’ first interview took place during the second year of their teacher education program and the second took place during the first year of in-service work. The below demographic variables further describe the 12 participants. This information was filled out in 2015 during their initial data intake.

Participants were from 7 different Faculties of Education across Canada covering a Western province, several institutions from central Canada and an Eastern province were included. All participants were enrolled in a 16 month long post education degree. The participants ranged in age from 27 to 43 at the time of the first interview. In terms of ethnicity, 1 participant identified as Aboriginal, 1 identified as East Asian, 9 identified as White, and 1 identified as French Canadian. The sample consisted of all females.

Ten participants reported they were indeed working for a school board. Four of these participants stated they were occasional teachers and 6 stated they had a teaching contract. The other 2 participants did not answer the question on the survey, but information gathered from their interview revealed 1 was working as an EA and the other was working as a professor at a college, as well as on the emergency supply list. Lastly, one was teaching at a private school.

The highest level of education completed among participants was a Master’s Degree in which 1 person endorsed this, followed by the remaining 11 participants indicating their highest level of education to be a Bachelor’s Degree (or equivalent).
In terms of exposure to individuals with diversities, every participant knew someone in their lives who had a diversity of some kind. To elaborate, 6 participants indicated they have an exceptionality, 8 indicated they had a family member with an exceptionality, 9 indicated they have a friend with an exceptionality, 8 knew a colleague or co/volunteer with an exceptionality, and 1 person knew someone in a professional role (e.g., a teacher, caregiver, advocate) who had an exceptionality.

When examining the amount of experience working with those who have SEN at the intake in 2015, 3 participants indicated they had little to no professional experience and 9 indicated they had moderate to extensive experience. In terms of personal experience working with those who have SEN, 2 participants indicated they had little to no experience, and 10 indicated they have moderate to extensive experience. By the second interview, every participant of course had moderate to extensive experience professionally as recent graduates. Where numbers still differed, however, was with personal experience with 4 participants indicating little to no personal experience and 8 indicating moderate to extensive experience.

**Procedure**

In Study two, participants were contacted two times for two separate interviews. The first was near the end of their teaching program and the second time was one year after teaching. See Figure 2. in chapter 2 for summary of the time points for Study 1 and Study 2.

During Time 2 preservice teachers were contacted again via email (emails retained from the consent forms participants filled out). This contact took take place approximately one year after Time 1 data collection. It is important to note participants were contacted at this point because by this time they had completed a course about inclusive education as well as have completing or in the midst of completing at least one practicum placement. Participants were emailed asking if
they would like to participate in a brief telephone interview. If participants agreed, their information was given to a research assistant to email the participant to set-up an interview within the following two weeks. Once the interview was scheduled, participants were emailed the interview question in order for them to generate possible experiences they wished to discuss in the interview. All interviews were audio-recorded and later transcribed.

The interview question had three parts and asked, “How confident do you feel teaching in diverse classrooms? Has this increased, decreased, or remained the same over this past year? What has contributed to your level of confidence for teaching in diverse classrooms? Interviews at Time 2 and Time 3 took place after participants completed their online surveys using Qualtrics. Note, the term “confidence” is used in the interview rather than “self-efficacy” as confidence was thought to be more relatable and common language to participants. Similar to self-efficacy, Webster’s dictionary defines confidence as, “a feeling or belief that you can do something well or succeed at something” (Merriam-Webster). Similarly, the term “Special education needs” (SEN) is not used in the interviews and instead, are termed “diverse learning needs” or “diverse learners.” This term was used to ensure participants could discuss any type of exceptionality students may have including giftedness.

The last contact at Time 3 took place after participants graduated from their teacher education programs and were working in their field in some capacity. Interviews at Time 3 followed the same procedure as interviews at Time 2.

Results of Interview Analysis

The below analysis will address all three components of this question in the same order it was asked in the interview with the first two questions grouped together followed by the experiences that influenced confidence levels (i.e., the themes). All themes participants discussed
in each of their two interviews are listed below and organized by first presenting Time 2 interviews and subsequently, all themes that were discussed in the final interview at Time 3 are shared. Real-quotes are taken from interviews to exemplify the experience (with identifying information removed and only ID numbers left for reference).

Themes were gathered using a thematic analysis which entailed 6 phases (Hayfield et al., 2017, p.23-33). The first and second phases are titled, “familiarization and coding” included becoming familiar with the huge amount of interview data gathered. This entailed reading through all interviews repeatedly and to begin noticing patterns, asking questions, thinking about beginning analytic ideas, and tracking ideas through note taking. Coding occurs after becoming familiar with the dataset and providing a meaningful label to particular parts of the interview. Phase 3 is found in an even deeper understanding of the data and turning the initial codes from phase 2 into themes. Phases 4 and 5 included reviewing the created themes in the contexts of the data and then deciding to keep, modify, or eliminate some themes. Lastly, phase 6 included creating the report in an organized way.

First Interview

How do Participants Describe Their Confidence?

Listed below are quotes teachers used to describe their level of confidence. First listed are teachers at Time 2 who reported they were confident. Next, are quotes from teachers who identified as being confident; however, they listed some sort of caveat to this level of confidence. Lastly, quotes are provided from teachers who reported to feel unconfident.

Confident Participants

During the first interview, while participants were still in their Faculty of Education, half of the 12 participants indicated their confidence had increased over the last year and therefore, were
feeling confident. Those who reported they were confident felt so because they believed in their ability to work hard and learn from mistakes. For example, one participant said:

I’m confident because I know that there are resources I can reach to, people that I can talk to, my past mentor teachers and I know that I’m willing to put in the effort to try different things and to try new things. Part of my willingness to try new things with my classes is because I know it’s okay if things don’t work out perfectly. Something else I learned in practicum, sometimes the mentors’ lessons would not go great and they’d be like that’s fine this is just how it goes…so I think I’m confident that I have the resources and the like the dedication to make it work (12031).

Another participant talked about her experience in learning children’s needs, “I felt more confident and I just felt you know, it’s OK to treat one child slightly different than the other because they need that. Like just to have that understanding for myself was really, really helpful (7073).

**Confident but with a Caveat**

Four participants discussed similar dilemmas in answering this question about confidence. Below in both quotes, it is shown that the teachers identify as being confident, however, this level of confidence is at risk of shifting if the current circumstances in their classroom change next year:

I think that there’s always more learning to be done with regards to instruction and meeting the needs of students…If I were to have a different class next year and have a new set of students I don’t know how I’m going to approach them or how I’m going to work with them. I think that it’s always an ongoing learning curve in learning how to work with different students cause no two students are the same in the way that they learn
or their output of work. I think that I’ve definitely become more confident since last year, since my last teaching block (2273).

Another participant stated similar thoughts:

I think that the only way to get up to a 9 or 10 is to work in a classroom consistently and you know, every year you have new kids and every year regardless if they have the same exceptionalities, it can be a different challenge. I’ve talked to teachers who have been teaching for 10 years and they’re still not completely comfortable because all of the sudden I have a visually impaired student... (10265).

Interestingly, another participant described her barriers to higher confidence as being practical in nature:

I guess I feel confident. I guess you know, I’ll make it work and I’ll do what I can but I don’t feel confident that I can provide for all my students… it’s making it work, the practical…. how does one teacher deal with seven students on IPPs [Individual Program Plan] in one classroom? I honestly don’t think you can…I don’t have that experience yet of having a teacher that was able to make it work... (6009).

**Unconfident Participants**

Lastly, two participants reported during the first interview that their confidence had decreased over the last year. One teacher explicitly discussed the reason for this decrease: “I think it’s decreased…Slightly because you’re just coming to me after I’ve supplied in this very very high needs classroom and I just felt so unprepared for somebody who’s just finished my teaching degree” (10257).
In summary, it is clear most participants (83.3%) are feeling quite confident at this point in their training. Discussed below are the experiences that have both negatively and positively impacted confidence levels.

**What Experiences Shaped Teacher Efficacy? Responses from Time 2 Interviews**

Every participant discussed practicum in one form or another as shaping and influencing efficacy—whether decreasing or increasing it. Some discussed “practicum” directly as a whole experience for shaping efficacy, whereas others discussed more specific components of practicum (for example, associate teachers). Those who discussed practicum in general are discussed first followed by the specific components of practicum.

Even further below, are experiences that were most common among participants that are separate from practicum (e.g., volunteer experiences or support from friends and family) that have impacted efficacy. See Table 4 for a summary of themes discussed across each interview.

**Gaining General Teaching Experience from Practicum**

8 participants discussed experience gained from practicum to be a positive experience that helped to increase confidence. One person shared negative experiences and one discussed a mix of positive and negative experiences. To note, general experience gained from practicum included using trial and error in teaching methods, having a reality “shock”, and overall increasing confidence to be in the classroom around children of varying needs. Some touch upon associate teachers here (although there is a separate section for those who explicitly discuss their associate teachers). Many participants talked about the concept of gaining general experience by being in the classroom as a reason for an increase in efficacy. One teacher identified that learning various lessons from course work is important, but feels that their true learning occurred in the classroom while on practicum:
The courses that we've gone through at [name of participant’s program], they've attempted to, I guess, they've like attempted to prepare you as much as they can, but when you get into the classroom it's a whole different game…I think the most valuable experience a teacher, especially in the beginning will get, is just getting thrown right in and being like, this is what the reality is (13043).

Another teacher discussed the importance of making connections between theoretical knowledge gained from coursework to practical situations at practicum. In this experience, the teacher was able to witness how different teaching styles have varying influences on learning across multiple situations. This teacher said learning this connection allowed for a realization that trying things out and messing up is acceptable (12031).

Two other participants discussed the value of experimenting with various teaching methods and learning strategies that can be used in the classroom:

- I feel much more confident, it’s increased greatly over the past year…and what’s contributed to that specifically is experiencing it…So actually being in an inclusive classroom and around students with exceptionalities and getting to know how to teach them and interact with them and having that opportunity, that is definitely what has boosted my confidence…getting out there and trying these things and seeing what works and what doesn’t and probably the fact I’ve gone out and done things that have failed (7073).

Another participant discussed this point:

- Just about seeing other strategies that other teachers have used. . . I think that's the only real way to gain confidence is to try different things and it almost seems like a double-
edged sword because you need like trial and error to figure out what works but you don't want to do that to the detriment of the student… (13047).

Some participants, however, stated that gaining more experience decreased their confidence. For these two participants, they felt overwhelmed by the amount of diversity present in the classroom. For instance, one participant stated:

I went to teacher’s college and I have learned so much, like so much during my practical experiences about seeing the inequity in education and how schools look different, how teacher from teacher look different, and how classroom to classroom look different. And by seeing all that, and experiencing that I think I’ve really learned the hard way that teaching is a really tough profession and I’m not very confident in teaching in a diverse learning environment, I just feel like it’s never gonna be good enough… I’m just entering the profession, possibly forever, so that’s the reason why it decreased over the years. Because my expectation of school was so easy, so idealistic when I entered, before I went [names location], and then the more I explore what school is, it’s not like that… the more you can get your hands on with working with student exceptionality I think is gonna be more benefit in the long run (14010).

Lastly, another participant went into detail about her frustration with not feeling the appropriate training was provided throughout her training which ultimately resulted in lower confidence:

I think it’s decreased…slightly because you’re just coming to me after I’ve supplied in this very very high needs classroom and I just felt so unprepared for somebody who’s just finished my teaching degree. To be dropped into this classroom and deal with the needs of these children…I was very frustrated with my program at that point, I just feel that I should have been prepared more for this. I know that no matter what I will be able to
handle it, it may not go as smoothly as I would like but I guess that’s just the “name of the game” sorta thing…(10257).

**Associate Teachers**

9 of the 12 participants discussed their associate teachers to have influenced their efficacy during the first interview in positive ways. One talked about receiving feedback, “I think my associate teachers have really helped to contribute to my level of confidence because they’ve been able to give me quick feedback whenever I’ve been doing something really well.” (13043)

Two teachers discussed associate teachers as filling a role that helped bridge the gap between learning from course work and implementing them into real-life scenarios. One participant’s description said:

I’ve also been very fortunate because I have had very forward thinking associate teachers that are very caring and they were willing to work with me and willing to give me the space and the support and I think that’s also contributed to my experiences in teaching…what has contributed to my confidence level (14010).

Another participant described how their associate teacher served as a role model for understanding how to reach the needs of students who have SEN. In turn, having this role model impacted efficacy for working with struggling students:

My relationship with my associate teacher has really been a confidence booster and working as a team has really helped…we’re working together and I’m mostly teaching, but to a certain point we are co-teaching so now, she can sit down with diverse learners while I am circulating with the rest of the class and she can do like, a small clinic with them and she’s getting to know them better so it will also tell me, like oh, this student really benefits when they do this…and I’m finding that what my beliefs were that they were not strong
readers has changed to, oh they just need…but also that relationship that I have with my associate teacher where we troubleshoot together and discuss and reflect together after work about what is working with the students (14006).

Coursework

Now, moving away from practicum experiences, several participants discussed and reflected on their Faculty of Education coursework. Overall, there were more positive experiences associated with course work than negative. Some participants who reported courses during their teacher education program to be helpful talked about specific courses which included Special Education courses, Educational Psychology, Cultural Responsiveness, Assessment, and Exceptionalities which were reportedly helpful for building efficacy. One participant described her appreciation for course work to help her understand the deeper meaning of why some children struggle with learning:

The [names the course] where we learned about specific designations and how that effects thought processes…and so being in class and learning like, this is actually what dyslexia is, this is how the brain is affected. I had some psychology classes as well…learning like people with ADHD will struggle with this, BECAUSE…and so learning the WHY made it a lot clearer…so my suggestions were not just “I’m going to try something randomly for you” it would be targeted and backed up…there’s evidence (12031).

In addition, despite feeling strong disappointment in general for the courses taught, one participant acknowledged the importance of one course:

Well the only class that has prepared me for anything in teacher’s college is my exceptionalities foci course. Um overall I’ve been fairly disappointed with teacher’s
college. I feel like I haven’t felt prepared really at all that much for actual teaching...really if I had not taken my exceptionalities focus course I would not be prepared for um teaching students with exceptionalities at all. It’s very rarely discussed in a regular teacher’s college course...and it’s not a mandatory course (7040).

Lastly, another participant reflected back on knowledge gained from course work to help understand students while in the classroom to better understand that their behaviours could be related to an exceptionality:

I think teaching the pre-teacher candidates the different types of exceptionalities so that they are more easily identified so if I see a kid… when I come to math class, he’s not doing anything and he’s goofing off maybe he has …what is it called when you have a math disability? …because I learned that in teacher education, I know that there’s a strong possibility that that student has that exceptionality and that he’s not just goofing off for no reason. If he honestly can’t put the numbers together…then so I think that base knowledge is helpful. But at the end of the day, it’s just being in the classroom and getting different experiences (10265).

On another note, two participants discussed how courses impacted efficacy in that they were an avenue for discussion. One participant enjoyed this aspect of the course and the other did not think it was useful. One participant said, “we have opportunities to do those things as a class (discussing experiences from practicum)... I don’t really feel like that’s done a huge thing for increasing my confidence level” (7073). Contrastingly, another said, “the classroom created a place to share experiences and open discussion… and kind of brainstorming ideas.” (12031).
Another positive impact of courses was learning from the professors themselves. Being able to hear from teachers about their own experiences instilled hope and normalized the anxieties of being a new teacher:

I think that hearing from professors and more experienced teachers, like mentor teachers or a special guest of any sort, hearing them say that they didn’t know at first but now they have learned. Like kind of makes me confident that over time things will get easier, over time I will develop the skills that I may not have already and I think that’s very positive and contributes to my confidence that I would take on any classroom. Yeah. Like kind of it would be a worthwhile struggle even if it was a struggle (12031).

One participant described past experience from a special education course from her undergraduate degree that helped her become more comfortable working with children who have exceptionalities, “meeting people and also the experience in the classroom, the experience in the community centres all of that has contributed to the confidence for teaching in a diverse classroom” (10206).

One participant discussed a negative aspect of course work. There was concern the course work wasn’t applicable enough to the events that will occur in the classroom. One participant said:

I would say on a scale from 1-10 I’m probably at a 7 [talking about confidence level] because I understand that kids learn differently and that you need to adapt your teaching style to that…And I think that some of the classes we’ve taken have touched on it and I know they tried really hard with some of the programs in the classes that we’ve taken but it’s not quite there. You know that feeling where the information is there, it’s just not
being given to us in a way that is actually applicable…learning about theory…I just want to know how to deal with a kid who is refusing to do all work … At the end of the day the only way you’re going to learn is getting into the classroom more or to see it and have those experiences… I think that they’re really afraid to give actual solutions because they say like “oh it’s a case by case and you know, I can’t answer to that question” Well I need you to answer that question… Like I need you to say, “for this specific child…what do I do?” Because a big answer about the abstract is not going to help. They don’t even touch on gifted students at all and I think that’s a big one because I would have NO idea how to teach a gifted student…none whatsoever (10265).

**Student-Related Factors**

Several participants talked about factors relating to students in the classroom. Grouped together these are identified as “student-related factors” and below they are broken down into three categories: aggressive behaviour, student’s progress (often being able or unable to meet students’ needs), and lastly, getting to know students. Among these categories are both their positive and negative impact on teacher’s development of efficacy.

**Aggressive Behaviour.**

One participant described how aggressive behaviour in children has been a barrier to building efficacy when interacting with these children:

> Over last year my confidence has increased you know with practice with practicums but I still don’t feel very confident…and even though I have a lot of experience with different exceptionalities… If there are children who are aggressive or violent that’s still something that scares me… I haven’t had many violent children in my experience. I have had a few. But when you learn, when you know the child well as a person well and you
know what triggers them and how far they can go, sometimes I find it reassuring to know well this student will do this but that’s as far as he’ll go. But I know if I do this it will calm him down... (10206).

**Watching Students’ Progress.**

Two participants discussed how their confidence increased and was boosted after watching students build their skills over time:

One thing I would like to add that adds to the confidence is seeing, seeing progress and seeing successes…this morning I was telling my associate teacher, I said there’s something in the water. Like, the students who were not handing in their work before are coming to me and saying, did I hand everything in, am I on time with everything, and I said yes, and they looked, you know, very happy (mutual laughter). It was several students this week that have changed their behaviour and I’m, what’s going on, this is fantastic…So, that’s the meaning of success, and like, I was doing something right (14006).

I had one student, I was in a French Immersion school, and French was his third language. He was an ESL student and he just, like I really struggled to ensure that he was included in the classroom. And he was just like so nice, would nod along, even if he didn't know what I was saying and like, didn't want me to feel bad in any way. And so I really struggled to be able to assess whether he was understanding or not, and then what needs to be done to bridge any sort of discrepancies between what he's understanding and what I'm saying (13047).
Getting to know the Students.

Some participants also talked about getting to know students and forming connections with them as an avenue for building efficacy:

I think the knowing part it helps me to be more confident so when you’re thrown into a new classroom with new little faces and new little characters that, that causes me to feel uncomfortable and lack confidence. But as I get to know the students then I’m more comfortable … Just knowing the child helps to intervene in an appropriate way that works with the child (10206).

This participant went on to say that greeting students individually each day made a huge impact on forming relationships:

I would greet every child individually as they came into the classrooms in the morning and I named them. It was my way of practicing their names and I greeted them as a person you know not just “good morning class” but good morning Bob, good morning John, good morning Sam, good morning Alice, good morning everybody and they started to say good morning to me as they would come in. Sometimes I was turned around and they would come in and say good morning to me and it was important…. They were a person they weren’t just a class they were a person and I, they had value in me and that I valued them and they felt important… It didn’t matter what your strengths were academically everybody was important when they came into the classroom. They were all my students and I was happy to see everybody. And I think that, I did see it as a habit … and I realized that that was really important in setting the relationship with the students (10206).
Likewise, another participant discussed how forming relationships with the students is especially important when learning how to interact with various ages of children:

I’m also realizing though from one grade to the next…so like walking into the grade 6 class this year my confidence dropped a lot during the first week only because I don’t have the experience working with older students. I’m very comfortable with the younger ones and then walking into grade 6 and they’re like dabbing and doing these water bottle flips and like, I don’t even understand the slang that they’re using (both laugh). It was such a culture shock for me, that’s probably the best way to put it. But once I got to develop more of a relationship with the students and get to know them and what their interests were, you know, I didn’t have yard duty the first week I was there, but I went out on yard duty just to see their interactions with one another and see who the friends were in the class. Just to understand them in that way and now I’m definitely a lot more confident than I was in the first week (2273).

Lastly, another participant talked about the timing of relationships. Specifically, it appeared that getting to know students at the beginning of the year was beneficial:

I think with the 2-year program, and we started off in practicum this year, so we were there on the first day of school, um, that was really great to be with the students and especially with the diverse students, like, starting off that relationship right away instead of jumping in midway through the year and trying to get that connection within 4 weeks. It was great to like to start off the year and be like, I'm going to be with you for 6 weeks, your teacher doesn't really know you yet, I don't really know you yet . . . like . . . let's get that relationship established (13043).
Participants’ own Exceptionalities

Despite 50 percent of teachers (6 teachers) identifying themselves having an exceptionality themselves (as indicated when they filled out the demographic questionnaire), only one discussed their exceptionality in the interview pertaining to efficacy levels. Of note, no participants discussed the exceptionalities of friends or family members.

This participant talked about their own exceptionality as well as their step-son’s during the Time 2 interview. This participant stated that her step-son had a mental health diagnosis as well as having experience with her own anxiety disorder. This participant stated that her lived experience with mental health challenges hasn’t necessarily increased her confidence for working with diverse children, but that it has helped with understanding children in the classroom, she said, “I think I was very trepidatious to work with exceptional students even though I had direct personal experience with an exceptionality…I really think the biggest thing is, and by a vast majority, is just the experience of doing these things” (7073).

Resources and Lesson Planning

A lack of resources created varying challenges for 4 participants. Only one shared a positive experience. It is clear from one participant’s response that she was struggling to deal with the practical demands of the job. For example, she said:

Because of time pressure and so many different needs and so many different levels of programming and that’s what makes me feel unconfident. I can honestly say that in talking to a lot of the other teachers that I was at last year, and that was only one school, but I think they all sort of feel that way and there was a lot of pressures within the school….I guess I feel confident. I guess you know, I’ll make it work and I’ll do what I can but I don’t feel confident that I can provide for all my students” (6009).
This same participant went on to further address this issue with having to be responsible for the varying needs in the classroom, particularly with respect to lesson planning:

Yeah, it’s making it work, the practical…. how does one teacher deal with seven students on IPPs in one classroom? I honestly don’t think you can…I don’t know, I don’t have that experience yet of having a teacher that was able to make it work and I don’t know how you do that, I just don’t know… and I know talking to my classmates… my situation this year was completely “normal.” There were large number of students with IPPs. It depended what school you were at as well. You know, one of my classmates had said the school he was at none of them were on IPPS…they’re all in grade 9 and can barely read he’s just like, lowest common denominator basically is what it becomes. He’s like they’re all getting extra help…how do you teach 8 grade levels in one grade 9 class? and he’s like, and none of them are at grade 9. He’s like how do you teach social studies to a grade 9 class that reads at a grade 1 level. How do you do that? I have no idea like how do you do that? I just don’t know and I don’t know how they can teach preservice teachers to do that, I really don’t (6009).

On a different note, another participant was struggling with finding effective and available resources to teach with that would meet both the curriculum standards but also be digestible enough for the struggling learners in the classroom:

I’m also struggling with resources you know, uhm, not only is reading material, like modified reading material, so, in context, I teach grade 7 [named subject] right now in an immersion school and also [names other subject]. And I’m finding it’s very difficult one to find materials to teach everybody with, like, general reading material for the whole class that is at their level and interesting for them…and then on top of that, I have to find, or
translate by myself like a simplified version of the text for example, if it’s for a reading accommodation and so finding that is time consuming and difficult, like, there’s not a lot of resources...so it’s very demanding in a certain sense (14006).

One participant touched on a positive perspective of lesson planning, “part of my willingness to try new things with my classes is because I know it’s okay if things don’t work out perfectly...something else I learned in practicum is sometimes the mentors’ lessons would not go great and they’d be like that’s fine this is just how it goes” (12031).

**Volunteer Experiences**

Only one participant shared her experience with volunteering that helped to build efficacy in the inclusive classroom:

I don’t have any experience in a specific special ed classroom…I would probably just relate back to special Olympics. The ice area is no different than a classroom, it’s just a different setting...we have a number of skaters that are non-verbal and last week I was able to teach a routine so like a set of steps in a particular order to a skater that was non-verbal and he was able to remember the steps and do them again and again. It was just through lots of eye contact and positive reinforcements and high-fives and hand signals and things like that. That was a really cool thing, that we were able to communicate even though there wasn’t really a language (2273).

**Colleagues and Collaborating**

Two participants in the first interview touched upon collaboration as a means of building efficacy. This participant talked about having support from classmates helped increase confidence, And uh just open discussion with my peers in class as well, um and kind of brainstorming ideas. Everyone has something new and how we all were interested in learning
more. We’re all interested in um like uh making it work for our classroom and taking care of our students” (12031).

Last year I had a good relationship with the SERT [Special Education Resource Teacher] and was able to troubleshoot with her as well. Just talking to the vice principal at my school. The conversations with other professionals within the school in terms of, hey, what can we do about this student who is asking for body breaks, like, what can we do, what is available, what is your schedule, when can they come down, things like that, so getting to know what is available in the school in terms of support. Oh, there is a student teacher in the school who is ready to come and read, or, do we want to do reading buddies with like, the grade 6 class and the younger class, and just things like that that we can easily put in place that supports the school community as well as the students (14006).

School and Teaching Culture

Three participants discussed themes that touched upon the school’s environment and culture. Two discussed these in purely negative ways. One talked about overhearing teachers speak negatively about students. The other described a lack of cohesion among teachers, “There’s just kind of like a lack of team work maybe. It’s different from school to school but it’s just the one that I’ve seen so far (14010).

Lastly, another participant described how having different placements throughout a city showed how differing socio-economic statuses and working with ESL students (English as a second language) both increased and decreased confidence:

One student couldn't make it to school because of a battle with his parents like, going on, so like, it's just, with all of that going on, even if 16 students were present in the
classroom that day, not all 16 were in there because they were either getting help with ESL, or they were going and getting help with special needs, so like, it was, they were never all there because of all of their diverse needs.

This participant went on to describe the higher income schools and the differing struggles there which included dealing with more argumentative parents who were wealthier:

I go to my last practicum in grade 5/6 in the rich school in [name of city] with 28 students and 3 IEPs [Individual Education Plan], but, there was confrontation with parents there and things like that. Because you struggle with that then when you have the financials…in my perspective I'd kind of rather be with the ones that, like, really appreciate the teachers” (13007).

**Expectations**

Two participants shared how the expectations they had about teaching and their programs altered their efficacy levels; one talked about this positively and the other negatively. The positive participant shared a very pragmatic viewpoint in knowing that sometimes lessons or teaching don’t always go as planned and was prepared to face these times:

I know that I’m willing to put in the effort to try different things and to try new things. Um part of my willingness to try new things with my classes is because I know it’s okay if things don’t work out perfectly” (12031).

The second participant who talked about expectations did so more negatively in that a more optimistic viewpoint was first perceived of what teaching would be like and was quickly changed when entering different teaching contexts:

I went up north I thought, oh, teaching is so easy because I’ve only seen the teachers that are in my socio-economic area, like that are teaching in the school that I’ve been going
to, right?...so that’s what I thought teaching was, like, oh, it’s so easy. You just give them work and they’re gonna do it (mutual laughter). And I went up north and that all went out the door and that really was not what it was...and then I went to teacher’s college and I have learned so much, like so much during my practical experiences about seeing the inequity in education and how schools from schools look different, how teacher from teacher look different, and how classroom to classroom look different. And by seeing all that, and experiencing that, I think I’ve really learned the hard way that teaching is a really tough profession (14010).

Reflecting on Childhood

One participant talked about a childhood experience from elementary school that helped increased confidence. This participant shared how having a fellow student in the classroom with a diverse need helped to educate him on the benefits of inclusion even from a young age:

I remember when I was in elementary school, so quite a few years ago, we had sort of students that had different learning needs and they were in our classroom and I think that maybe all of us feel, I hate to say it, but more comfortable…the beginning part of my education we had like special education classes that were separate from ours so we never really got to interact with the children that were in that class and then we had one little girl that would come in our class and she, I can't remember all of it but I know she had epilepsy and it was real nice. We all got to work with her and become her friend and you know build a relationship and for a while it felt like we were supposed to feel like they were different from us and we shouldn't have been in the same classroom but having her come in made us realize no like we're all the same we can all work together and that it's okay to have everyone in the same classroom (13007).


Second Interview

How do Participants Describe Their Confidence?

The following sections are organized the same way as above, however, this information is now from Time 3 interviews in which case participants had graduated from their Faculty of Education programs.

Confident Participants

During the final interview, 7 of the 12 participants indicated their confidence had increased in the past year. These were participants who did not have any “caveat” to their confidence, but rather felt their confidence blatantly increased. These types of responses were similar to the following, “Yeah, it’s definitely increased” (7073) and, “…my confidence has increased over the last year” (10206).

One participant talked about being confident, however, due to each child’s unique needs this participant shared their confidence had been shaken:

In some ways having more experience I’m more confident now but also I have recognized how unique each student is and how like it’s not just “Oh I’m going to hand out my adapted work to some people.” It’s a lot more than that. So it’s also kind of a daunting task which almost makes it a little more, me a little more less confident…I don’t know I think probably overall I’m more confident but I’m also more cautious, perhaps (12031).

Confidence Remained the Same

Two other participants shared that their confidence levels “are the same” as last time mainly due to underestimating the level of experience required to work with varying children’s
needs. The other participant identified their confidence to remain the same in the sense that it has just been “altered” but not necessarily increased or decreased.

**Unconfident Participants**

Two participants stated their confidence had decreased since the first interview: “It definitely has decreased, my confidence of teaching in diverse classrooms” (13047). The other shared, “I would say it’s probably decreased” (6009). Interestingly, these two participants had identified their confidence to have increased in the first interview.

**What Experiences Shaped Teacher Efficacy? Responses from Time 3 Interviews**

Many of the same themes presented in the second interview as listed above for the first interview. There were, however, four new themes that emerged: professional development, past careers and education, support from friends, and experience from working in the field (see Table 4 for a summary). For the sake of keeping the two interviews consistent, themes are presented in the same order as much as possible.

**Reflecting on Experience Gained from Practicum**

Like in their first interview, participants at Time 3 also reflected back to practicum experiences and recalled a mix of experiences that both increased and decreased efficacy:

I think it has increased…and the reason is, it was just a lot of just being exposed to a lot of different learning environments during my practicum, like, definitely helped because I had something to go off of where I could make connections between this child and that child, and this student and that student right? and then seeing different environments, like, different teaching styles really helped as well because like the structured classroom that I saw in life skills classroom could be transferred to other classrooms right? (14010).
Again, similar to the first interviews, one participant pointed out the link between course work and the “real-world” classroom experience, however, contrastingly, it was commented on how different they are:

Like no matter how much, or how many assignments you do, or how much you do the readings, and it’s all these studies etc. It’s not the same as being in that classroom with that student and staring them down saying I have one finger up. If I add three more how much do I have, and they can’t even look at your hand and read the numbers on your hand sticking up. And I think a lot of teacher would get frustrated like I did at the beginning and now I’m learning that they are trying their best and there’s no study that says that like when you do that it usually says they’ll understand or it’s a better approach for them. Whereas when you’re in that real life situation that’s not necessarily the truth. So I think the alteration of my confidence has been that until I actually get an established relationship with that student set in place, I’m not going to fully understand how to approach them (13043).

**Associate Teachers**

Four participants reflected on their associate teacher as impacting their efficacy while now currently in a teaching role. Two indicated associate teachers to still have a positive impact while two indicated the experience to be negative now. An example of a positive influence is shared below:

My associate teacher at the very, like my very last placement last year…he was really great helping me out with the different grade levels and everything. He was the class that had the two gifted and then the ones that were also learning at a grade 3 level when they were actually in grade 5. So he, he really helped me and I could show him my lessons and he’d say that’s too tough and I need to go back and try something else or that’s too easy they’ll
be offended if you give them that. So it was nice having him in my corner to give me constructive criticism so I could improve my practice (13007).

Another participant commented on how an associate teacher served as a support guide while on practicum placement, however, once she went into the workforce, she no longer had that same support-this was one of the more “negative” themes:

It definitely has decreased, my confidence of teaching in diverse classrooms. You know, you kind of going through teacher’s college, you have this support you have this safety net of your associate teacher and someone kind of guiding you. And now that I’m in a situation where I’m kind of flying solo (13047).

Coursework

Two participants reflected on courses they took in their Faculty of Education as still being impactful on their efficacy while now out working in the field. Specifically, teachers talked about Special Education courses, Educational psychology, and an Urban course about diversity. The courses themselves were helpful in terms of the content taught as well as the professors who taught the courses:

Having the courses that we did at [named university] really did help. It, that’s where I gathered a lot of what I know and a lot of what I think I can do, and it was just going into the school and seeing it in action that cemented that those are the right things to use... definitely spec-ed and educational psychology as well, because it touched upon teaching different levels, like different grades, and I think that really speaks to um, like learning disabilities and children that are gifted, that kind of thing… I had um, I had X for Spec-Ed and I love her, I think she’s a lovely teacher. She really did help me to feel confident, and she should be commended on that (13007).
Similarly, another spoke positively of her instructor who was candid about their own experiences as a teacher. This participant said, “Professors and more experienced teachers/guest speakers helped when they said they didn’t know at first either and that developing the skills just takes time” (12031).

In addition, there were two participants who described that coursework did not prepare them for real-world situations. In fact, one participant stated, “All the reading you do or assignments…it does not match the actual experience of being with that student in the classroom” (13043).

**Student-Related Factors**

**Aggressive Behaviour.**

Two participants were very candid in not feeling confident with students who display some aggressive behaviours at school. The first participant talked about being uncomfortable with the aggressive behaviours and not knowing the student’s limit:

I’m still uneasy, like, I lack confidence when it comes to really aggressive behaviour …I have no problem with children who are special needs physically or mentally challenged, no problems in that perspective. But when it comes to children who display aggressive behaviour like throwing furniture, or really really screaming, or hurting other children, or even adults, I still get uncomfortable. Especially because I don’t know the student and their limit (10206).

The second participant was more concerned about the nature of the aggression and understanding what her role was when a child became aggressive:

I’m not super confident yet with dealing with students who have behavioural issues, because I don’t, it’s not necessarily related to learning. It could be something that’s going
on outside of the home, outside the school, I mean. Inside the home. So I still find that I struggle with behavioural issues because I don’t know what I should be doing: I don’t know if this is a legit behavioural problem or if I should be sending them to the principal’s office, or if I, you know, I don’t know how much it’s going to escalate and that, that’s something that I’m not confident, I don’t think you ever really become confident with that, but it’s just the, you know, I think it’s also the, the fear of the unknown because you know, with my kids at home I can count backwards from five. They know the consequence when I get down from five. But if you’re dealing with students who don’t know you and, like, you can’t really punish them when you have behavioural issues, you’re kind of stuck (10265).

**Watching Students’ Progress.**

Four participants during the second interview discussed seeing students’ progress as a factor for influencing confidence. Three discussed progress to be a positive influence and one discussed this to be negative on confidence levels. The positive experiences are shown first followed by the negative experience. The first positive experience discusses how over time seeing progress influenced confidence:

She came to this class, she’s for reading and knowing all sorts of things, but, but behavioural and emotional, that was, that was really really behind and it’s really nice to be able to see that progress … So, it’s nice. It’s really, it’s really heart warming and it’s, and it gives me confidence right? It’s like my work that I do, there’s, look what I have so far and it’s only five months into school and look what we have to show for it, for our hard work, and that, that gives me more confidence too (10206).
A participant who felt a lack of student progress decreased confidence levels shared the following:

I think where I do lack confidence is accepting some students’ unwillingness maybe to uh, to put in to that extra effort…You know, you want your students to all be performing, you want them to all have threes in your classes and fours, and you’d all stay at recess and work with them and make all the accommodations but if they are tired or if they’re not interested or motivated then despite all of the accommodations or all of the effort that I put into it, they’re not always going to get that level three that we hope all our students will meet. So I think that’s where I lack confidence, is accepting what my student’s goals are (14006).

A third participant described a mix theme of positive and negative views on students’ progress and its impact on confidence levels:

Even in my grade one classroom now I have students that possibly have ADHD or a learning disability but they’re not yet identified. Um, but it’s every time I teach I don’t know if I’m reaching that student…Because I could teach in the most broken down language and they’ll go to me a minute after the lesson and say I don’t know what’s going on, so, when every other student is completing the work and saying it’s easy …(13043).

Lastly, another participant shared how over time they have been able to work with students in order to help them progress:

I didn’t quite know how to approach that situation and it was like every single day was a struggle with that student until finally I broke through with him, and it was obviously right, like three days before I left that LTO but I, gained that confidence near the end…but
it’s every time I teach I don’t know if I’m reaching that student…I was thinking about it, and I, if I walked into a teacher’s college practicum now, with a first-year teacher and they saw that kind of student, I don’t think they would know how to approach that student. Whereas I now feel like I could give them different techniques that I’ve used in real life (13043).

Getting to know the students.

Four participants described the benefits of building relationships with children over time and how this positively impacts efficacy for using inclusive practices. The first participant below talked about being a supply teacher versus having a long-term contract and how this impacts the ability to build these relationships:

when you, building a relationship first…in May and June after I finished teacher’s college, I was doing a day-to-day supply teaching, and every day was a different school…that was really difficult because those difficult children, like those children who have challenges or special needs, I did not have a relationship with them at that point…sometimes I remembered their names from taking attendance, but often I didn’t and I found that very very challenging, and I can say in those moments my confidence really dropped…but then when you’re supply teaching every day at the same school, I know all the students at that school, it’s a 400 student school, but I knew them all because I was there so much. And now I’m at one school doing an LTO for the year, so I know the community and know all the students too and so we have a relationship. You see them in the hall, good morning, and you build this nice positive relationship so when you have to deal with a negative situation or, or a more challenging situation, you already have a rapport. And it’s, you’re
more confident to interact with the child, or intervene if you need to do something because you have that rapport and relationship already built, but that helps with confidence (10206).

Similarly, another participant discussed how building a relationship with students by getting to know their struggles has helped to in turn, build better techniques for teaching:

So talking with students who are diverse learners and just kind of hearing like their struggles and what works for them and how it’s rewarding and how like that motivating feeling to keep going and we keep trying to do my best and keep improving my technique. But also learning how individual they all are (12031).

Lastly, another shared how learning about teaching techniques in coursework is far different from carrying them out in the classroom. Specifically, this participant discussed that due to this implementation challenge, building a relationship first has proven beneficial:

And I think a lot of teacher would get frustrated like I did at the beginning and now I’m learning that they are trying their best and there’s no study that says that like when you do that it usually says they’ll understand or it’s a better approach for them. Whereas when you’re in that real life situation that’s not necessarily the truth. Um, so I think the alteration of my confidence has been that until I actually get an established relationship with that student set in place, I’m not going to fully understand how to approach them (13043).

**Resources and Lesson Planning**

Several participants talked specifically about lesson planning with their current roles and how this has influenced their confidence levels. The first quote listed below talks about ensuring the lesson is differentiated enough to reach all students:
I’m really just trying to ensure that even just my lessons are being, I’m able to reach my students and I’m catering my lessons properly and my assessments are good and the classroom management is there, so when it comes to the differentiation and reaching the students who aren’t kind of, at grade level, I definitely struggle with that (13047).

Another talked about the practicalities of the time it takes to learn new lesson plans as well as having to do this without the same support as in practicum:

I would say it’s gone down and maybe some of that’s jaded, but um, it’s the actual like, you know, you don’t have someone to sort of look over your shoulder and be like yeah you’re not doing the right thing, or you know, try this resource here, this is really helpful. Plus you’re going from, usually you’re teaching something on practicum that you’re comfortable with So I need to keep at least a couple classes ahead of you and so you’re moving into stuff that you’re not necessarily comfortable with so I’m having to find things for the students to do, learn how to do them, and then you know, get it organized as well and worry about all these adapts. So I would say it’s gone down I mean and it’s just in terms of the hours and the time that I have to put into it (6009).

Lastly, and on a different note, another participant has become overwhelmed by technologies and learning how to integrate them into her teaching plans:

Where I struggle is, and I’m learning but the amount of technology that is available to students and to teachers, but I’m just feeling overwhelmed with like where do I even begin? And where can I learn more? Cause they have programs to teach students how to use the iPads and the apps and this, but they don’t educate the teachers on how to do it… And as much as I think I’m tech savvy, it’s like there’s so many like amazing apps that are out there, but it’s like how do I even begin to know that such a thing exists (2273).
**Professional Development**

A participant talked about taking the Additional Qualification course (AQ) in Special Education in person versus online:

I’m definitely feeling more confident that special education course was a huge learning for me and I had friends that took it online and said they hardly got anything out of it… So I’m really happy that I did take it in person, um, just for the fact that it was hands-on, the conversations that took place, um, and then having the consultant from the board being the one to instruct it, it was um, really great for her to uh, be bringing current things into the classroom for that learning (2273).

**Past Careers and Education**

Two participants talked about past careers as contributing to an increase in efficacy, “I feel very confident teaching in diverse classroom…it’s definitely increased, and I know that is directly related to working as an EA and having that opportunity to work with students with diverse needs and the experiences” (7073). Another talked about a retail role and the unexpected position she found herself in:

This probably sounds silly but I used to work in retail. I worked at a children’s clothing store and generally children with exceptionalities would come in and talk to me, and I’d be the person that, you know, would just hang out with them and help them out when their parents were shopping, and I had a lot of positive feedback from that. Like one woman her son was autistic and he normally didn’t want to shop because he absolutely hated it. But I talked to him and made conversation and he would shop and get that stuff done. So that helped me to feel more confident in my interactions because it meant on some level I feel like he trusted me (13007).
Lastly, one participant talked about growing up having a parent who worked in the field of education and how this impacted her perspective on students who have SEN:

My mom worked a lot with helping children with learning disabilities so I kind of grew up with the understanding that not everyone learns the same way. So that, coming into the, you know, that shaping my belief system about understanding that we’re not all the same. I’m a month away from getting my Masters of education, my mom has her Masters of Education and you know, so, we’re a fairly educated family but I grew up understanding that we’re not going to be A+ students (10265).

**Colleagues and Collaborating**

There were three participants who discussed the value and benefit of having colleagues to consult and collaborate with. All participants talked both about having support as extremely important, but also being able to collaborate and brainstorm together was helpful in building efficacy. Below are the three various experiences:

Co-teaching in a special classroom, able to reflect together: “definitely having a partner teacher in the first year really helped, that model of teaching, because you were able to um, like reflect a lot more, reflect on a student, or like just anything like that, just having that support (14010).

Having those conversations with the resource teachers is wonderful. It is hard to track people down. Everyone is so busy but the one I pass often we kind of have the same office space so that works out well for me (12031).

I think my confidence has increased…I’m currently doing an LTO for the whole year, so every day you’re teaching that helps your having your colleagues support, is, is very beneficial. Having your principal support is very beneficial, especially when you have,
like I have a student this year in my class, the principal has presented my case with my student and I have a behaviour consultant that has stepped in and we’re part of creating a special plan for her, for this child to help her cope in a classroom. So that’s really beneficial and you feel supported (10206).

**Work Experience in Teaching Role**

Unsurprisingly, participants relied on current work experience as new teachers to use as factors that have influenced efficacy. One participant went talked about how having to “jump right in” was the best way she learned:

Having the opportunity to work with the special education resource teachers in one of my LTOs I met, I sat down with parents during a psych ed evaluation, I’ve helped develop individual educational plans for students which was a really interesting thing, it was like my first ever supply call and I ended up being in a class for three and a half weeks…It was one of, I think it’s one of the best ways to learn is to really just be thrown into it, so I had a lot of support in helping me through that, but I really learned a lot from that and it was actually within that class that I had my first opportunity um, to work with students that were gifted… I’ve never really been exposed to gifted students, and it was really fascinating to see the total opposite end of the spectrum for what I was, I’ve been used to working with…so I think my confidence in that regard has grown (2273).

Another participant talked about her current role as an occasional teacher and how rewarding this role is right now for her to gain experience working in various settings:

I’ve just gained a lot of experience in diverse classrooms and it definitely like pushes you, and makes your more confident in dealing with those particular group dynamics…Like I’m gaining a lot of experience and I’m not in a rush to necessarily,
to have my own classroom when I am gaining this invaluable experience… And I like to like push myself to go into like different schools and not just stay at the same school all the time… Even just like different areas of the city I live in. It changes so much like, the um, the demographics of each area are so different… So every school provides, and even seeing how each administration at each school handles their diverse groups, like you learn so much from that in terms of like professionally in my career (10257).

**School and Teaching Culture**

Some participants discussed the school culture that they teach in with a mix of positive and negative experiences. One participant discussed in length the disappointment and frustration that was felt while working at a specific school as she feels her teachable of Science is seen as less important than other subjects:

But now that I’m sort of in it, and sort of see like, you know, science is a lesser, you’re not the core, you’re not an English math teacher so you’re not as important kind of thing…That really discourages me, that really annoys me, I really like science and I have students that, you know, only do well in science class (6009).

Unfortunately, this teacher also discussed the school culture among some older teachers to be unsupportive:

In terms of realistically where I came from, the B.ED to now, being in my own classroom, stayed the same or gone down a little bit, because you know, the reality of the situation is I can find, you know, I’m struggling to find the appropriate worksheets, the appropriate level of um, activities, of assessment, trying to figure out how the system works, which I think is a big part of it and I don’t know how to advocate for those kids. I’m being told
basically “oh poo hoo, first year teacher, it’s okay, you don’t understand” and I’m like will someone take me seriously for a change? There’s a serious problem and we’re doing this kid a huge disservice. Kind of sort of, you know, oh boo hoo, first year teacher you just don’t know what you’re talking about. Go back and make your lesson plan (6009).

Similarly, another said, “There’s just kind of like a lack of team work maybe. It’s different from school to school but it’s just the one that I’ve seen so far“ (14010).

Although this next participant didn’t explicitly indicate the following experience to be positive or negative, there is some understanding that there’s an expectation and pressure to learn the school’s “language” of acronyms which for some time was challenging:

Yeah, and honestly the biggest thing is all the acronyms that people like to just throw out, and I’m just, I don’t know what that stands for. I feel silly asking but I find myself like going online and checking out after ‘cause they’re like the SERT, the this, the that, and I don’t know. I’ve never heard those before so that’s been the hardest part, is just finding out what it actually is that they’re referring to and going from there (2273).

Lastly, one participant shared a positive and collaborative culture at the school:

You can go in and see the IEPs but what’s more valuable I found is that at this school all of the special ed teachers that are the case workers I guess they send out notes to all the teachers of the students they are managing saying like “these are things that your strengths, your stretches and certain techniques that work like different adaptions, more time or a scribe or whether they have a resource block.” That’s helpful too so I can contact someone and say “I see that so and so is in your resource block. I’m looking for this package to be finished a week ago, I think he’s almost there” you know (12031).
Expectations

One participant reflected on what her expectations were before teaching versus the reality of the profession she is experiencing currently:

I think if I had more time and just like a little bit less on my plate, I would definitely love to be focusing on more…but I just feel a little bit you know, over, overwhelmed by everything. At this point, I’m sure it will get better throughout my career, I hope… I think it’s just kind of like this idea of myself having my own classroom and how I kind of saw it in my head where there’s like rainbows and puppies and we’d all be doing different tasks but getting along, and whatever and then the actual reality of my classroom, I’m like okay, those two things don’t even resemble each other, that that’s kind of, kind of contributed to the decrease. So I don’t know if it was kind of my own ideals, of how my first year would go (13047).

Results of Confidence Levels and Experiences

Reviewed below is a summary outlining the three patterns of confidence that were examined in the participant interviews at the two time points.

Steadily Confident

In summary, interview analysis showed that 6 participants, or half of participants, reported confidence that steadily increased across the two years (i.e., at both interviews they indicated their confidence increased in the last year) from the time participants were still in their Faculty of Education programs to their first year of teaching. For those who did not indicate a steady incline of confidence, several patterns emerged and are discussed below. The demographics of these 6 steadily confident participants were analyzed in the hopes of identifying patterns. Of these participants, there was a mix of grades taught; 3 who taught Kindergarten to
grade 6, two taught both elementary and secondary grades, and one taught only secondary. Four of these participants also identified on their demographic form that they have an exceptionality, despite only one participant talking explicitly about this with respect to increasing efficacy.

**Increased or Decreased Confidence**

Two participants started off more confident and then decreased by time 3. See discussion for the experiences that shaped these patterns of efficacy development. In addition, zero of the twelve participants reported efficacy to decrease at both time points.

**Confidence Levels that Stayed the Same**

Lastly, three participants “plateaued” in the sense that during the last interview they stated their confidence to be the same. One participant indicated confidence to have decreased during the first interview and then said it was the same in the last interview, and the other two had the opposite pattern in that in the first interview they reported confidence to have increased and in the last interview this increased confidence had stayed the same.

**Summary of Experiences Shaping Confidence**

In summary, gaining practical teaching experience was the most influential experience across interviews. As participants moved from preservice to in-service, a shift in experiences occurred where there was less reflection on past associate teachers and coursework and instead, a focus on colleagues, watching students’ progress, and professional development that increased efficacy levels. On the other hand, experiences that seemed to have a negative influence across time were the practical components of having to make lesson plans, find resources, and deal with more aggressive behaviours in students (see Table 4 for a summary of themes).

More specifically, while in preservice roles, participants focused more on the experiences gained from practicum placements and the guidance and modeling received from associate
teachers. Each of these two experiences had a total of 10 participants that made comments that fell into this theme. Nine of the ten participants described positive influences from practicum on confidence levels for working with children who have SEN. Similarly, nine of the ten endorsed positive experiences with their associate teacher for boosting confidence levels for working with students who have SEN. The next most discussed theme was related to students which was broken down into three themes. These included aggressive behaviour (negative), watching students’ progress (positive and negative), and getting to know students (positive and negative). The fourth and fifth highest themes came out at a tie with five participants sharing experiences that fit into the theme of resources and lesson planning as well as coursework. There were several other themes endorsed as shown throughout the interview quotes (see table 4 below for a summary based on frequencies of each theme).

Similarly, in the second interview, participants discussed practical experience to be most influential on the development of efficacy for inclusive practice. 9 participants talked about work experience 7 of which were positive and two who had mixed positive and negative experiences with teaching experience at work. In addition, the interviews illustrated the importance of colleagues and collaboration as well as watching students’ progress. Interestingly, even while inservice, just under half of participants still reflected on associate teachers (2 positive, 2 negative), as well as getting to know students (all positive), and lesson planning (all negative). See table 4 for all themes discussed.

Table 4. Frequency of negative and positive themes discussed across time.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Interview 1</th>
<th>Interview 2</th>
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<tr>
<td>General Teaching experience from</td>
<td>Positive: 8</td>
<td>Positive: 2</td>
</tr>
<tr>
<td>Practicum</td>
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<td>Negative:0</td>
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<tr>
<td></td>
<td>Both: 1</td>
<td>Both:0</td>
</tr>
<tr>
<td></td>
<td>Missing: 2</td>
<td>Missing:10</td>
</tr>
<tr>
<td>Associate Teacher</td>
<td>Positive: 9</td>
<td>Positive: 2</td>
</tr>
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</table>


<table>
<thead>
<tr>
<th>Category</th>
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<th>Negative</th>
<th>Both</th>
<th>Missing</th>
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<tr>
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<td>1</td>
<td>0</td>
<td>7</td>
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<tr>
<td>Student Related Factors:</td>
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<tr>
<td>Aggressive behaviours</td>
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<td>0</td>
<td>11</td>
</tr>
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<td>Watching student’s progress</td>
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<tr>
<td>Getting to know students</td>
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<td>0</td>
<td>9</td>
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<tr>
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<td>0</td>
<td>0</td>
<td>11</td>
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<tr>
<td>family member’s</td>
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<td></td>
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<tr>
<td>Resources and Lesson Planning</td>
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<td>2</td>
<td>2</td>
<td>7</td>
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<tr>
<td>Volunteer Experiences</td>
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<td>0</td>
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<td>Professional Development</td>
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<td>Past Careers and Education</td>
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<tr>
<td>Topic</td>
<td>Positive</td>
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<td>Both</td>
<td>Missing</td>
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<td>-------------------------------</td>
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<td>Colleagues and Collaborating</td>
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Chapter 6: Discussion and Recommendations

The purpose of the current study was to investigate both the development of teacher efficacy levels and the experiences that influenced efficacy development in beginning teachers across Canada. This goal was accomplished through a mixed-method design that tracked teachers longitudinally from preservice to in-service. The current discussion chapter combines interpretation of results from both Study 1 and Study 2. First, the development of participants’ efficacy is discussed followed by the experiences that influenced efficacy development.

Development of Teacher Efficacy for Inclusive Practice

Results of Study 1 used quantitative data to describe the development of teacher efficacy. It was shown that teachers’ efficacy scores for managing behaviour and using inclusive instruction increased significantly from the beginning of participants’ teacher education programs to the second year. There was no significant change in these efficacy scores in the transition to the first year of in-service teaching for any of the three efficacy scales and no significant changes in efficacy scores for Collaboration across any time points. Qualitative data from Study 2 also gave insight into confidence levels. Only four of the twelve participants interviewed indicated their confidence “increased” without exception across both time points. The other eight participants showed a mix of efficacy levels across time, with overall, more participants having increased confidence in at least one of the interviews. No participants indicated their confidence decreased at both time points, suggesting no participants became less efficacious in using inclusive practices with students who have SEN. These results suggest that teacher candidates’ efficacy levels are not changing significantly across time for being able to inclusively collaborate, but that they feel significantly more efficacious in managing behaviour and inclusive instruction strategies during their second year of teaching compared to their first
year and that this increase is maintained during the first year of in-service teaching, despite results not being statistically different from Time 1.

It is difficult to directly compare the current results with the literature as no studies currently exist that measure teacher efficacy for inclusive practice specifically from preservice to in-service teaching time points. There are studies that examined teacher efficacy from preservice to in-service, however, not necessarily for inclusive practices. The current study’s results are consistent with some of the literature in that efficacy rises during teacher training but does not continue to significantly increase in their first teaching year (Hoy & Spero, 2005). For example, Hoy and Spero (2005) found other similar results to the current study’s results. They measured personalized and general teaching efficacy at the beginning of participants’ preservice year, at the end of the preservice year, and lastly, at the end of their first teaching year. Results revealed teacher efficacy increased significantly on all three measures over the course of the preservice year and all three dropped significantly during the first year of teaching. The only other longitudinal study tracking general teacher efficacy from preservice to in-service teaching years found somewhat similar results to the current study. Dicke et al. (2015) measured efficacy for stress management and classroom management and found an increase in the middle of teacher education years and found no significant drop in efficacy in the first year of teaching.

Examination of cross-sectional studies investigating teacher efficacy levels in preservice and in-service teachers reveal more experienced teachers (i.e., more years teaching) have higher efficacy than those with less teaching experience (for example, Tschannen-Moran & Woolfolk-Hoy, 2007; Wolters & Daugherty, 2007). Interestingly, however, depending on the domain of efficacy being measured, the strength of these differences was not comparable. For example, Chan (2008) showed despite in-service teachers still showing significantly higher scores on
various more general efficacy measures than preservice teachers, this same pattern did not 
emerge when measuring some specific domains of efficacy. Chan found scores on classroom 
management and student engagement to be relatively lower than other domains. Perhaps these 
results are in line with why the current study did not reveal significant increases on all measured 
areas of efficacy across all time points due to the specific nature of efficacy being measured.

Similarly, research has shown beginning teachers tend to hold more optimistic outlooks 
and are more eager to use inclusive strategies. Some research shows new teachers were found to 
be more positive about using inclusion compared to those already in the field (Boyle et al., 2013; 
Gokdere, 2012) and they also tend to hold higher self-efficacy toward inclusion compared to 
those who are in the work place already. This may be because the ideas and teachings of 
inclusion are fresh in their mind. The results showed that preservice teachers generally rely on 
what they are currently learning in their programs as their practical experience is still limited 
(Boyle et al., 2013; Gokdere, 2012). Participants in the current study had significantly increased 
efficacy for managing behaviour and using inclusive instruction while still in their Faculties of 
Education. Once entering the work force, participants continued to have stable efficacy, 
however, did not significantly increase. These results could be explained by the above mentioned 
studies’ findings in that preservice teachers are more optimistic and feel more supported 
compared to when in an in-service role.

The current study found elementary teachers to report significantly higher collaboration 
scores than secondary teachers. Those in their second year of preservice teaching who had 
moderate to extensive levels of personal and professional experience working with children who 
have SEN also reported significantly higher efficacy scores for collaborating than those with 
none to little experience. Specht et al (2016) found similar results, however, unlike Specht and
colleagues, collaboration scores in the current study did not differ significantly for those who were in-service teaching compared to those in preservice. Grade taught and sex were not significant which could be due to the small sample size. When measuring efficacy for managing behaviour, results showed those with extensive to moderate levels of professional experience with students who have SEN had higher efficacy scores from the beginning to the end of their preservice program than those with little to moderate experience with students who have SEN. This increase was no longer significant at time three when participants were in their first year of teaching. Lastly, no demographic variables were found to significantly impact inclusive instruction scores.

These results may suggest those who started off having less efficacy eventually caught up after training and experience.

To better understand why these changes occur in beginning teacher’s efficacy scores, two interviews were conducted with participants. Interview data provided an even richer explanation in understanding why teacher efficacy changes with respect to various influences and experiences. As discussed in the introduction, the majority of the literature on the development of teacher efficacy lacks the understanding as to what experiences are linked to change in efficacy (e.g., Hoy & Spero, 2005). To address this gap, the current thesis asked participants what experiences influenced efficacy levels. Responses from both interviews are listed below and organized by theme.

**Summary of Differences and Similarities Between Interviews**

As shown in Table 4, various themes were discussed across both interviews. There were, however, some unique themes discussed in each interview. Despite some shared themes being discussed in both interviews, depending on the time point (preservice or in-service) there was a
greater emphasis on a particular theme for each interview. These differences are important in illustrating which experiences are influential at various time points in beginning teachers’ journey for using inclusive teaching practices.

Comparing participants who were preservice vs in-service it appears one of the biggest differences in influential “experiences” is that by the time participants are in-service, they find professional development and past careers to be more important experiences for shaping efficacy than those in their teaching programs who did not discuss either of these experiences. Preservice teachers tended to rely more on practical experience gained from practicum as well as knowledge from coursework. Practically, these differences make sense. Those individuals still in teacher education programs lean on the supports directed at them in the program (practicum, associate teachers, and coursework). Those who are in-service do still reflect on associate teachers and coursework as being helpful, but to a lesser extent from when they were in preservice, but different from being in their teaching program, they now rely on gaining more teaching experience as in-service teachers.

**Practicum, Associate Teachers, and Work Experience**

It was evident from thematic analysis of interviews that gaining general teaching experience positively influenced efficacy levels from the time of entering teacher education programs to the end of the first year of in-service teaching. During participants’ time in teacher education programs, based on responses in interviews, it appeared for the most part, general teaching experience allowed them to be immersed in teaching experiences and solidify concepts that were learned in coursework.

The second top listed experience was working with associate teachers which nine participants endorsed in the first interview as being positive influences and one participant had a
negative experience. By the time participants were almost finished the first year of in-service teaching, four still discussed and reflected on positive experiences with associate teachers as helping build efficacy for inclusive practices. As noted in interview responses, those still in their teacher education programs found associate teachers to be willing to guide them, mentor them, and serve as a role model to watch conduct lessons and interact with children in the classroom. Of course, by the time participants were in-service teachers, they did not have associate teachers. For those in-service teachers, the experiences that increased efficacy for inclusive practice from the transition into the work field was continuing to gain teaching experience. This experience was endorsed by seven participants as being a positive experience and two endorsed it to be a mix of negative and positive experiences. These three experiences are lumped together in this section as they each carry similar underlying themes of gaining teaching experience in the classroom in both a teaching role and through associate teachers.

These experiences of gaining general teaching experience through practicum, working, and modeling after associate teachers and its subsequent influence on efficacy levels compares similarly with other longitudinal research. For example, Peebles and Mendaglio (2014) found as participants gained more field experience from practicum their efficacy increased. The results can also be explained through Bandura’s (1977) social-cognitive model which explains four sources involved in increasing efficacy. As a reminder, the first is mastery in which teachers see themselves as being successful in completing a task and will therefore predict to be successful in future attempts. Gaining mastery experiences while on practicums could explain why at both interviews, gaining experience was a top listed experience for increasing efficacy.

The second component is vicarious learning in which individuals observe qualified teachers perform a task successfully; these observed behaviours are then translated into one’s
own actions (as indicated from those at both interviews who shared watching associate teachers provide lessons to the class increased their confidence). Contrastingly, two identified associate teachers as a negative experience in the second interview, not because they were reflecting on poor experiences, but because they felt no longer having the support (i.e., the vicarious learning), was a blow to efficacy. These participants mentioned support, feedback, and modeling as effective lessons gained from associate teachers.

These comments also fall into the third component which is *receiving feedback* from a qualified teacher on one’s weaknesses and strengths and can also include the learning perspectives of the qualified teacher themselves to provide insight.

Lastly, one’s emotional state such as anxiety, stress, or being relaxed all influence one’s perceived level of competence in a given task. Thus, having efficacy does not necessarily mean one legitimately has capability in their role, it is their *own belief* that they are capable that is important for defining oneself has having efficacy. This theme is shown throughout the teachers who indicated they were efficacious (the “confident” teachers). In fact, they are aware they have room to improve, yet, they still state they are confident. For example, one said, “it’s OK to mess something up” (12031) and another said, “just knowing there will always be space to learn, I think that it’s always an ongoing learning curve in learning how to work with different students cause no two students are the same in the way that they learn or their output of work.” (2273)

Unconfident teachers’ comments can also be explained by Bandura’s (1977) model in that they feel there was no opportunity to build a sense of mastery, it was challenging to respect/learn from some associate teachers which then resulted in a lack of receiving feedback and absorbing knowledge through vicarious learning (components 3 and 4 of the model). Lastly, these participants described feeling overwhelmed, frustrated, and stressed by the lack of
preparedness and diversity in the classroom which may all hinder one’s belief they have efficacy for handling a classroom with students who have SEN.

**Coursework**

The fourth most talked about experience across interviews that helped increase confidence was coursework. Four participants endorsed statements that fit under this theme and one still reflected on coursework to have helped increase efficacy while in-service. These results show that despite some participants sharing positive experiences from coursework, many more participants did not endorse it as an experience that increased confidence-especially once graduated and working in the field.

In 2015, McCrimmon published a summary examining the courses offered in the Faculties of Education from four prominent Canadian universities. Specifically, he was seeking to identify the courses related to inclusive education and exceptionalities. He identified that most programs to not include adequate courses in topics of childhood exceptionalities or explicit instruction of inclusive practice. He examined course outlines and found none of the four major universities to explicitly teach childhood disabilities and exceptionalities (that is learning their descriptions and definitions). He found programs to generally only offer one or two broad courses covering topics of inclusion such as a single course on psychological issues in the classroom or a very broad topic of inclusive education with respect to curriculum and practices and even one university had one course on students who have SEN and has zero focus on inclusive education. Although his review is not an extensive one across Faculties of Education in Canada, if this is representative of the courses offered to preservice teachers, perhaps this could explain why not every participant is reflecting on coursework as a factor for increasing efficacy working with students who have SEN. Similarly, Alisic et al. (2012) found teacher participants
to share perspectives of inadequate training. Participants’ responses indicated that coursework from teacher education programs did not adequately prepare them to work with students who have SEN when transitioning from teacher education programs to the work force. Even more, efficacious participants shared in interviews their biggest need from their teacher programs is to learn additional methods of how to support these children in their classrooms. Sharp et al. (2016) found knowledge gained from a course on literacy instruction for students who have SEN did not significantly predict teacher self-efficacy. It was found that coursework that is more practically based than theory based is more influential on teacher efficacy.

A more recent study, however, discovered more promising results. For example, at a different Canadian university, Friesen and Cunning (2018) measured efficacy using the TEIP (among other measures) before and after a course participants took about inclusive educational practices. They found a significant increase in efficacy levels after the course was complete.

The translation of knowledge from coursework to practical work was examined by Peebles and Mendaglio (2014); with a sample of 141 preservice teachers, they found that more experience working directly with students who have SEN relative to in-class instruction or using observation methods lead to greater gains in their self-efficacy. These results suggest that field experience (i.e., practicum) may be a better predictor of increasing teacher-efficacy. The results of the current study aligned with these research findings and even more interestingly, as was the aim, participants’ interviews were able to provide explanations as to why this is the case. These participants with lower efficacy (“unconfident” participants) stated that 1) coursework was not specific enough to translate to applied strategies and 2) there was not sufficient information or experience with students who exhibited aggressive behaviours. This barrier was also listed while in practicum, showing that this experience of feeling unprepared from coursework is still being
listed as a reason for not feeling efficacious even one year later (see results section in chapter 5 under Coursework). In fact, one participant explicitly stated this point, “All the reading you do or assignments…it does not match the actual experience of being with that student in the classroom.” (13043). Given that teacher education programs are now two years in length, a shift in adding more practical components to coursework is required to relieve these barriers (Lancaster & Bain, 2010).

**Student Related Factors, Resources and Lesson Planning**

Participants reflected on student related factors and felt they both increased and decreased efficacy. During preservice, getting to know students over time was endorsed by two participants as helping to increase efficacy. By in-service, however, more participants (four individuals) endorsed getting to know students as critical to laying a foundation for learning. Similarly, across interviews, watching students’ progress was a positive impact on efficacy, particularly for those who were in-service teachers. Students’ aggressive behaviour was discussed as negatively impacting efficacy by a couple of participants almost equally across both time points. The current reflections on student-related factors to impact efficacy levels is similar to research completed by Young et al. (2018). They showed in their qualitative study that teachers identify many experiences to influence efficacy including managing behaviour, influencing academics in their students, building relationships with students, and creating relationships with colleagues and parents. In addition, Bandura’s (1977) sources of efficacy would also describe a sense of mastery that has built over time for working with aggressive children as well as getting to know students and watch them progress. Of course over time, more mastery experiences with students were likely and thus, more participants endorsed these as positive experiences in increasing efficacy.
While in the second year of their Faculty of Education program, five individuals commented on resources or lesson planning to influence efficacy. One was positive, two negative, and two were mixed. When in-service, four participants still talked about these experiences, however, they were negative in nature. These participants indicated the following: a lack of physical resources such as desks for students and too many demands in one classroom for teaching (e.g., one participant talked about having to teach several different reading levels in one class). In fact, one of these participants stated that the more diversities they saw in the class the more their efficacy went down and a sense of hopelessness washed over them. Lastly, learning how to handle the many modifications and accommodations required within one class was an experience that decreased efficacy levels. Interestingly, it was also discussed that in practicum placements, participants chose a topic they were familiar with when it came to teaching, but once in-service, the expectation of teaching everyday means being exposed to lessons that are out of one’s comfort zone. This results in a lot of time being spent preparing and learning these lessons. Lastly, the implications of some students not being formally identified with an exceptionality posed some challenges. Some participants stated they were unsure of what students’ needs were which resulted in lower efficacy knowing if the student’s learning needs were being properly addressed and met.

It is clear from these negative experiences that a sense of mastery is lacking. Bandura’s self-efficacy theory would argue there is a stronger need for modelling more experienced teachers (i.e., vicarious learning), particularly for subjects the new teacher is less experienced with. The research also shows that preservice teachers tend to rely on current knowledge learned in class (Boyle et al., 2013; Gokdere, 2012). This is problematic when teachers finish their teacher education program and enter the work-place. A sense of mastery is lost suggesting the
learning gap between preservice and in-service teaching is too large and requires more support for lesson planning and modeling more experienced teachers.

**Colleagues, Collaboration and School Culture**

The current study found the support of colleagues and collaboration to be positive influences for increasing efficacy. Only one participant endorsed this in the first interview, but by the second, while out teaching, half of participants discussed colleagues as a source of increasing efficacy. It appears then, when out working in the field, the collaboration and support of colleagues is very important. Two participants in each interview also listed barriers to a positive school culture which included “talked down to” based on the subject she taught as it was seen as a “lesser” subject. Another theme was that compared to practicum, there is now no one-on-one direct support as needed.

These results are consistent with existing research as well as Bandura’s self-efficacy theory. For example, Tschannen-Moran and Woolfolk-Hoy (2007) investigated sources of self-efficacy in teachers from the United States comparing differences between beginning teachers (novice; with 3 or fewer years of teaching experience) and experienced teachers (career; with 4 or more years of teaching experience). Specifically, one part of their analysis examined Bandura’s sources of efficacy and found for verbal persuasion, the support of colleagues and the community explained the variance in novice teachers (those with less than three years of teaching experience). Another qualitative study, however, showed that early career teachers (in first three years of teaching) were asked to indicate challenges they faced. One theme that emerged was a lack of support from colleagues (Schuck et al., 2018). Also discussed at the second interview, was the importance of talking and collaborating with other school personnel outside of regular teachers. This included having support from vice-principals, attending
psychology meetings, and brainstorming with early childhood educators and special education teachers. Half of participants mentioned they feel supported and that their struggles are normalized when talking to other classroom teachers at their school or colleagues/friends from other schools. The sense of an inclusive environment, receiving feedback, and mastering scenarios with time all reduce anxiety and stress. Thus, once again, Bandura’s self-efficacy theory can explain these results.

**Expectations of Teaching**

One participant in the first interview had a realistic expectation of teaching in that through trial and error this participant knew creating appropriate teaching methods would come with time. However, one person preservice teaching and two in-service participants identified feelings of naïveté. Participants shared comments such as, “I thought it [teaching] would be rainbows and puppies” and another said, “I had rose colored glasses on.” Another participant identified not fully understanding how challenging or different material learned from coursework was from the actual classroom would be. As discussed in chapter 3, the transition from preservice teaching to in-service has been termed as a “praxis shock.” Praxi shock takes place due to the differences between teachers’ expectations of what teaching would be like and the reality of the difficulties encountered in the first year of teaching (Mark, 1998). Due to the stress and feelings of being overwhelmed, beginning in-service teachers and even preservice teachers, are at risk for burnout. Bandura’s (1977 source of *emotional arousal* is relevant here in that emotional arousal influences self-efficacy through physiological methods. When one is in a stressful or demanding situation, emotional arousal can be a good detector of perceived self-efficacy. High arousal in the body when anxiety is present and can be an indicator of efficacy levels. If one does not have the physiological arousal from anxiety, they can likely attest this to
having high self-efficacy for this given situation or task. Interestingly, the two quotes listed above are from participants who in the first interview indicated their efficacy to have increased, but by the second, they shared it had decreased. The feelings of stress, burnout, and resulting anxiety due to the expectations of what teaching *would* be like, may have result in identified lower levels of efficacy.

**Professional Development, Past Careers and Education**

There were several categories that had only one or two responses across time. At time one these included one person talking about their own exceptionality, one person reflected on volunteering experiences, one talked about her frustrations of the program and one reflected on a childhood experience in being in an inclusive classroom. At time two, one person talked about support from friends. Given the low frequency of these themes, it could be concluded they are less critical in the impact of teacher efficacy.

**Summary**

It is evident from thematic analysis of experiences discussed across both interviews that some experiences are valuable across time and others are unique to the specific stage of teaching. Preservice teachers tend to rely heavily on practicum experience and associate teachers for increasing efficacy for inclusive practice. They also rely on concepts, theories, and discussions had in coursework to increase efficacy. On the contrary, those who are in the first year of teaching tend to rely on colleagues, gaining teaching experience, professional development and both getting to know their students and watch them progress as ways for increasing efficacy levels. In-service educators also changed from having any positive experience with lesson planning and access to resources to all negative.
Table 4 shows the experiences that were discussed across both interviews. Some of the most frequently discussed experiences that were shared in both time points were gaining relevant teaching experience (practicum, teaching experience), associate teachers, and factors related to the students such as getting to know students and watching them progress. Similarly, both time points discussed a mix of positive and negative experience with lesson planning and having access to resources.

**What do These Combined Results mean for Faculties of Education Across Canada?**

Faculties of Education across Canada would benefit from having its faculty members learn about the real life longitudinal experiences of beginning teachers across the country. The experiences of beginning teachers are important information for the future educators of Canada because research has shown many positive outcomes when teachers have high efficacy. Specifically, research has found teachers’ efficacy to be related to higher student achievement outcomes, motivation, and for building self-efficacy in students themselves (see Tschannen-Moran et al., 1998 for a review, p. 222). In addition, teachers with high efficacy are also more agreeable to experimenting with new ways of teaching and conducting lessons to meet the needs of their students (Cousins & Walker, 2000). They show higher levels of planning for lessons (Allinder, 1994) and work harder and persist longer to help meet the needs of their struggling students (Woolfolk et al., 2009).

Based on the detailed interviews of beginning teachers, the following recommendations are provided in two categories: recommendations for Faculties of Education and recommendations for hiring school boards respectively.
Recommendations

Faculties of Education

1. Providing more time in practical based settings.
   - Practicum teaching experience was one of the top reported experiences participants listed for increasing efficacy. Quotes revealed that these experiences helped to build “mastery” experiences. Continuing to ensure these experiences are available to preservice and beginning teachers is invaluable and critical to teacher training. Note: it is important to ensure these additional placements take place in positive settings that promote inclusion rather than in segregated settings.
   - Gambhir et al. (2008) say the purpose of practicum placements is to apply research and pedagogical methods learned from coursework. It is possible teacher candidates require longer practicum placements to further apply knowledge from coursework into teaching experience.

2. Provide additional opportunity to connect with associate teachers.
   - Working with associate teachers was the other top reported experience for having a positive impact on efficacy levels. In addition, one participant talked about not having a good connection with her associate teacher which impacted her ability to learn from her.

3. Possibly integrating more “rotations” of practicum placements to ensure a diversity of experience.
   - Most programs offer multiple placements during programs, however, perhaps more are required to experience various learning needs of the children.
- For example, one participant said that being exposed to different classes and different teaching styles during practicum helped with increasing efficacy as well as creating connections for future situations. (14010)

4. Creating more practical lessons in coursework.
   - Participants enjoyed courses related to exceptionalities (educational psychology, spec ed, and exceptionalities).
   - Many participants commented, however, they would like the courses to be more didactic (share experiences, talk about specific ways to help students) and focus less on theory. It is the case many professors include open discussions and didactic training, however, this could be more emphasized as an important way of teaching.

5. Continue offering courses specific to children with exceptionalities and how they learn.
   - A handful of participants found these courses helpful (Educational psychology and Special education).
   - Several participants had taken, or planned to take the special education courses once they graduated. Perhaps more attention should be paid to special education or inclusive education in the program.

6. Continue having experienced teachers come in to Faculties of Education and speak to teacher candidates about their experience and providing “real life examples.” Participants identified hearing how teachers themselves struggled in the beginning gave them hope and increased efficacy. One participant talked about creating a way to hear more from the children’s perspectives at school for teacher candidates to learn from them (e.g., having field trips with the kids coming in to the faculty or vice versa).
School Boards

1. Ontario uses the New Teacher Induction Program (NTIP) to support beginning teachers in the first few years of teaching.
   - No teachers in the current study explicitly discussed NTIP, however, they did mention the importance of mentoring and support for building efficacy. Perhaps creating a separate mentoring program within schools could help to increase supports and build efficacy.
   - In addition, putting more of an emphasis on NTIP as a source of support for new teachers may be needed and could help to mediate this challenge for beginning teachers.

2. A “sharing” program of resources, especially for beginning teachers.
   - Trying to find relevant resources was a commonly cited concern for beginning teachers, especially when they require modification.
   - Many participants also talked about having to accommodate and modify lesson plans took up a lot of their time ultimately causing stress.

3. Creating more collaboration opportunities.
   - Many participants talked about the biggest impact on efficacy levels was being able to brainstorm ideas with various school personnel that weren’t regular classroom teachers (e.g., special education teachers and educational assistants).
   - Perhaps a type of routinely scheduled “case rounds” meeting could be had amongst regular classroom teachers, special education teachers, and educational assessments. Case rounds could involve brief brainstorming discussions about
students who are having challenges (separate from traditional involvement with school psychology)

4. Professional Development.

- Only participants who were in-service talked about professional development as being a positive influence for increasing efficacy for inclusive practice. However, these participants did discuss that these opportunities are taking longer to complete (e.g., Additional qualification courses) than they would like due to the cost. Perhaps more senior teachers, principals, or anyone willing could facilitate (or continue to facilitate) routine weekly or monthly training seminars at their schools.

**Limitations and Future Research**

Several limitations existed in the present study. First, inclusion criteria being that all participants had to participate in each time point resulted in small sample sizes in both studies. Thus, the ability to draw conclusions come with some caution. For example, all interviews were from female participants which is one way the data may not represent all teachers across the country. Similarly, as with all research, extending the sample to other nations would benefit in generalizing findings.

Furthermore, the interviews only tracked into the first year of teaching. It would be beneficial for future research to extend the longitudinal nature of the project to identify how time and experiences are shaping efficacy levels in the first few years of being a new teacher, particularly as a prevention method against teacher burnout.

It was also observed from demographic questionnaires that 41.6% percent of participants in study 1 identified as having an exceptionality. It is possible due to participants having their
own first-hand experience with exceptionalities this could have created a sample of participants who are more willing to discuss exceptionalities and are more aware and understanding of exceptionalities than a more neutral sample might have been.

Lastly, in the hopes of understanding the experiences of new teachers, the current study has done so by asking directly about experiences that have shaped current levels of efficacy. The next step for research might be to follow-up with participants directly about what problem solving needs to be done based on the current findings (i.e., how to foster the positive experiences and problem solve to reduce the negative experiences participants identified). Thus, future research could use interviews to ask if participants feel a need for a change to faculty of education training and the transition to becoming a new teacher. If they indicate yes, they could be asked to provide suggestions.

**Conclusion**

The current thesis is the first known research study to examine beginning teachers’ efficacy levels for inclusive practice longitudinally while also investigating the experiences that impact efficacy levels. The study aimed to understand how efficacy levels changed from preservice to in-service years across three levels of efficacy: Collaboration, Managing Behaviour, and Inclusive Instruction. In addition, through two interviews, the study examined the experiences that both positively and negatively impacted levels of efficacy across time. Thus, the current thesis reveals new insight into the supports teacher candidates and new in-service teachers require more of, need less of, or want altered to increase their efficacy for using inclusive practices.

Results showed teacher efficacy for managing behaviour and using inclusive instruction increased significantly from the period participants were in their first year of Faculty of
Education into their second year, but did not change significantly when in the first year of teaching. The highest frequency of experiences or “themes” discussed as influencing efficacy levels both positively and negatively was gaining teaching experience at practicum and while working as a new teacher, interacting with associate teachers, and coursework.

The results of the current research allow for recommendations for Faculties of Educations and hiring school boards across Canada. As described in interviews, participants’ top three experiences have shaped recommendations for increasing and improving practical experiences to build mastery skills, increased time and connection with associate teachers, and increased didactic opportunities in coursework to learn from guest speakers and practical lesson plans.
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Guidelines for Inclusion: Ensuring Access to Education for all.


Appendices

Appendix A

Project Title:
The Development of Inclusive Educational Practices for Beginning Teachers

Principal Investigator:
Dr. Jacqueline Specht, Professor, Western University, London, ON

Letter of Information

Invitation to Participate

My name is Dr. Jacqueline Specht and I am a Professor at the Faculty of Education at The University of Western Ontario. I am the director of the Canadian Research Centre on Inclusive Education and we are currently conducting research into preservice teachers’ beliefs of inclusive education practices in Canadian classrooms and would like to invite you to participate in this study.

Purpose of the Letter
The purpose of this letter is to provide you with information required for you to make an informed decision regarding participation in this research.

Purpose of this Study
The purpose of this study is to explore the self-efficacy, beliefs, and instructional practices of beginning teachers identifying the factors that shape their development over time and in the context of their initial teaching experiences. Through this study, we hope to gain a better understanding of how teachers develop their instructional knowledge and practice to meet the needs of students in diverse Canadian classrooms, spanning the period from initial professional development through the first years as an educator.

Inclusion Criteria
Individuals who are enrolled in a teacher education program at a participating Canadian post-secondary institution are eligible to participate in this study. Participants must be at the beginning of their teacher preparation programs.

Exclusion Criteria
Individuals who are not enrolled in a teacher education program at a participating Canadian post-secondary institution, and those who are not at the beginning of their teacher education program, are not eligible to participate in this study.

Study Procedures

If you agree to participate in this study you will be asked to complete survey questions about your beliefs and experiences teaching in an inclusive classroom. Completion of these questionnaires will take place within the Faculty of Education at your respective university and will take approximately 30 minutes of your time in one session. The task will be conducted in person in a course related to special/inclusive education.
After completion of the in-class survey, you will be asked if you would like to participate in subsequent surveys. Subsequent surveys, should you choose to participate in these, will be conducted online throughout your program tenure and into your first years of teaching, using Qualtrics, a secure survey platform used by Western University. These tasks will take approximately 30 minutes of your time. If you elect to participate in subsequent surveys, you will be asked to leave your contact information in a separate section (not linked to the survey data). Personal information will be removed from the research data and kept separate from this. Unique identifiers will then assigned to each survey for the purposes of protecting personal information while tracking participants for the duration of the research study.

You will also be asked if you would like to participate in follow-up interviews. Participation in the interview component is entirely voluntary and separate from the survey component; involvement in the initial survey component does not mandate involvement in the follow-up interview component. Subsequent interviews, should you choose to participate in these, will be conducted in your first years of teaching. If you elect to be contacted to participate in the interview component, you may be sent an email requesting you to respond to me stating that you are interested. The researcher will contact you to set up an interview time and private location convenient to you. Interviews will be recorded using audio recording procedures; participants who do not wish to have their interview audio recorded will not be able to participate in the interview portion of the study. It is estimated that each interview will take approximately 30-60 minutes. All interviews will be audio-recorded. Audio-recordings will be transcribed verbatim. Any information that could identify you, your place of study, or your place of employment will be removed.

There will be a total of 300 local and 4500 total participants in this study overall.

**Possible Risks and Harms**

There are no known risks or harms associated with participation in this study.

**Possible Benefits**

The possible benefits to participants include enhanced knowledge about themselves as educators (strengths and weaknesses) and enhanced knowledge of effective educational practices in working with diverse learners. Participants may benefit from improved teacher training opportunities that develop from this research. Societal benefits of this study include enhanced professional practice for teachers, training and skill development for teachers, and new and enhanced partnerships amongst researchers in education.

**Compensation**

As an incentive to participate in this study, you will have the opportunity at the completion of the initial survey to enter your name to win a draw for 1 of 15 $25 gift certificate for Indigo/Chapters. Participants who participate in subsequent aspects of the study (surveys, interviews) will automatically be entered into a draw in each year in which they participate. Each year they will have a chance to win 1 of 15 gift certificates.

**Voluntary Participation**
Participation in this study is voluntary. You may refuse to participate, refuse to answer any questions or withdraw from the study at any time with no effect on your future academic status or employment. Withdrawing your participation or not answering questions will not disqualify you from being entered into the draw for a gift certificate in the year.

Confidentiality

All data collected will remain confidential and accessible only to the investigators of this study. Personal information in this study will only be collected if you offer this information to the researcher on the initial survey. Personal information will be stored separately from the research data; research data, therefore, will not be identifiable in connection to personal information. Unique identifiers will be assigned to each survey collected in order to protect personal information.

All hard-copy data will be stored in a locked filing cabinet in a locked institutional office. Digital data will be stored on a password-protected computer on a secure network behind institutional firewalls, which will only be accessible to the researchers. The Qualtrics survey platform ensures secure transmission of data through the enablement of the TLS (transport layer security) encryption feature, and the masking of participant IP addresses from the survey author. For those who elect to participate in the interview component of the study, the researcher will maintain confidentiality through non-disclosure of identifying information (i.e. real names, locations, personal details). Pseudonyms will be used to protect confidentiality in the final research product. If the results are published, your name will not be used. If you choose to withdraw from this study, your data will be removed and destroyed from our database. All data will be kept by the researcher and stored securely for a minimum of five years. Data will be destroyed when no longer needed.

Contacts for Further Information

If you require any further information regarding this research project or your participation in the study you may contact Dr. Jacqueline Specht, Principal Investigator, by telephone at [phone number] or email to [email] Representatives of Western University’s Non-Medical Research Ethics Board may contact you or require access to your study-related records to monitor the conduct of the research.

If you have any questions about your rights as a research participant or the conduct of this study, you may contact The Office of Research Ethics (519) 661-3036, email: ethics@uwo.ca.

Publication

If the results of the study are published, your name will not be used. If you would like to receive a copy of any potential study results, please provide your name and contact information in the designated area after completion of the survey.

Consent

Written consent will be obtained in person in the initial surveys. Completion of subsequent online surveys is indication of your continued consent to participate. This letter is yours to keep for future reference.
Consent Form (Initial Survey)

Project Title: The Development of Inclusive Educational Practices for Beginning Teachers

Study Investigator’s Name: Dr. Jacqueline Specht
I have read the Letter of Information, have had the nature of the study explained to me and I agree to participate. All questions have been answered to my satisfaction. I understand that I do not waive my legal rights by signing the Consent Form.

Participant’s Name (please print):

_______________________________________________

Participant’s Signature:

_______________________________________________

Date:

_______________________________________________

Person Obtaining Informed Consent (please print):

_______________________________________________

Signature:

_______________________________________________

Date:

_______________________________________________
**Consent Form (Interview)**

**Project Title:** The Development of Inclusive Educational Practices for Beginning Teachers

**Study Investigator’s Name:** Dr. Jacqueline Specht

I have read the Letter of Information, have had the nature of the study explained to me and I agree to participate in the interview. All questions have been answered to my satisfaction. I understand that I do not waive my legal rights by signing the Consent Form.

- [ ] I consent to being audio recorded during the interview

Participant’s Name (please print): __________________________________________

Participant’s Signature: _________________________________________________

Date: __________________________________________________________________

Person Obtaining Informed Consent (please print): ___________________________

Signature: ______________________________________________________________

Date: __________________________________________________________________
Appendix B
Demographic Questionnaire

INTRODUCTORY QUESTIONNAIRE and COVER PAGE

Please √ on the line as appropriate.

A. I am preparing to teach in the following grades: (check all that apply)
   K-3 ______; 4-6 ______; 7-8 ______; 9-10 ______; 11-12 ______

B. I am: Male ______; Female ______; Trans* ______; Other (please specify) ______

C. How do you describe yourself? (You may choose one answer, or more than one)
   Aboriginal: ________
   Black: ________
   East Asian: ________
   Latin American: ________
   South Asian: ________
   Southeast Asian: ________
   West Asian: ________
   White: ________
   Other (please specify): ________

D. Birthdate (Day/month/year) __________________________

E. My highest level of education completed prior to entering this program is:
   Secondary School or its equivalent ________
   CEGEP (Quebec) ________
   Bachelor’s Degree or its equivalent ________
   Master’s Degree ________
   Other, please specify ______________________

F. I have encountered people who are diverse learners in the following ways (check all that apply)
   Self ______
   Family Member ______
   Friend ______
   Co-Worker/Co-Volunteer ______
   In a Professional Role (e.g., teacher, caregiver, advocate) ______
   Not at all ______
G. How much professional experience have you had working with individuals who are diverse learners? Please circle on the following scale, where 0= none at all, 1= little, 2= moderate, and 3= extensive.

<table>
<thead>
<tr>
<th>None at all</th>
<th>Little</th>
<th>Moderate</th>
<th>Extensive</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

H. How much personal experience have you had with individuals who are diverse learners? Please circle on the following scale, where 0= none at all, 1= little, 2= moderate, and 3= extensive.

<table>
<thead>
<tr>
<th>None at all</th>
<th>Little</th>
<th>Moderate</th>
<th>Extensive</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

I. To date, I have spent ________ weeks on practicum

J. My experience in teaching students with diverse learning needs to date is:

Nil ___ 1-30 days ____ At least 30 days ____
Do you wish to be contacted for future research?

This is a longitudinal research study; our goal is to track beginning teachers’ beliefs, attitudes, and knowledge over the course of their teacher education and into their first years of teaching. If you wish to participate in future research opportunities, all remaining communication will be sent through online methods (email, online surveys, etc.).

Would you be willing to be contacted over the course of this research to participate in future research opportunities?

Yes _____ No_____ 

If YES, please specify your name and permanent email address where you can be contacted:

Name: ____________________________________________

Email Address: ____________________________________
Appendix C
Teacher Efficacy for Inclusive Practice (TEIP) Scale

This survey is designed to help understand the nature of factors influencing the success of routine classroom activities in creating an inclusive classroom environment. Please circle the number that best represents your opinion about each of the statements. Please attempt to answer each question.

<table>
<thead>
<tr>
<th></th>
<th>1 Strongly Disagree</th>
<th>2 Disagree</th>
<th>3 Disagree Somewhat</th>
<th>4 Agree Somewhat</th>
<th>5 Agree</th>
<th>6 Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I can make my expectations clear about student behaviour. (MB)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I am able to calm a student who is disruptive or noisy. (MB)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I can make parents feel comfortable coming to school. (C)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I can assist families in helping their children do well in school. (C)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I can accurately gauge student comprehension of what I have taught. (II)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>I can provide appropriate challenges for very capable students. (II)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I am confident in my ability to prevent disruptive behaviour in the classroom before it occurs. (MB)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I can control disruptive behaviour in the classroom. (MB)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>I am confident in my ability to get parents involved in school activities of their children with disabilities. (C)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>I am confident in designing learning tasks so that the individual needs of students with disabilities are accommodated. (II)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>I am able to get children to follow classroom rules. (MB)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>I can collaborate with other professionals (e.g. itinerant teachers or speech pathologists) in designing educational plans for students with disabilities. (C)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>I am able to work jointly with other professionals and staff (e.g. aides, other teachers) to teach students with disabilities in the classroom. (C)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>I am confident in my ability to get students to work together in pairs or in small groups. (II)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>--------------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>14</td>
<td>I can use a variety of assessment strategies (for example, portfolio assessment, modified tests, performance-based assessment, etc.). (II)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>I am confident in informing others who know little about laws and policies relating to the inclusion of students with disabilities. (C)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>I am confident when dealing with students who are physically aggressive. (MB)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>I am able to provide an alternate explanation or example when students are confused. (II)</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**C - Efficacy in Collaboration**

**MB - Efficacy in Managing Behaviour.**

**II - Efficacy to use Inclusive Instructions**
# Appendix D

## Research Ethics Approval

**Western University Health Science Research Ethics Board**

**NMREB Delegated Initial Approval Notice**

**Principal Investigator:** Dr. Jacqueline Specht  
**Department & Institution:** Education/Faculty of Education, Western University

**NMREB File Number:** 106761  
**Study Title:** The Development of Inclusive Educational Practices for Beginning Teachers  
**Sponsor:**

**NMREB Initial Approval Date:** July 17, 2015  
**NMREB Expiry Date:** July 17, 2016

### Documents Approved and/or Received for Information:

<table>
<thead>
<tr>
<th>Document Name</th>
<th>Comments</th>
<th>Version Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruitment Items</td>
<td>Recruitment Email, Interviews</td>
<td>2015/05/14</td>
</tr>
<tr>
<td>Recruitment Items</td>
<td>Recruitment Email, Online Survey</td>
<td>2015/05/14</td>
</tr>
<tr>
<td>Instruments</td>
<td>Interview Questions</td>
<td>2015/05/13</td>
</tr>
<tr>
<td>Instruments</td>
<td>Teacher Efficacy for Inclusive Practice (TEIP) Scale</td>
<td>2015/05/12</td>
</tr>
<tr>
<td>Instruments</td>
<td>Beliefs about Teaching and Learning Questionnaire (BLTQ)</td>
<td>2015/05/12</td>
</tr>
<tr>
<td>Revised Western University Protocol</td>
<td></td>
<td>2015/06/18</td>
</tr>
<tr>
<td>Instruments</td>
<td></td>
<td>2015/06/18</td>
</tr>
<tr>
<td>Revised Letter of Information &amp; Consent</td>
<td></td>
<td>2015/06/18</td>
</tr>
</tbody>
</table>

The Western University Non-Medical Research Ethics Board (NMREB) has reviewed and approved the above named study, as of the NMREB Initial Approval Date noted above.

NMREB approval for this study remains valid until the NMREB Expiry Date noted above, conditional to timely submission and acceptance of NMREB Continuing Ethics Review.

The Western University NMREB operates in compliance with the Tri-Council Policy Statement Ethical Conduct for Research Involving Humans (TCPS2), the Ontario Personal Health Information Protection Act (PHIPA, 2004), and the applicable laws and regulations of Ontario.

Members of the NMREB who are named as Investigators in research studies do not participate in discussions related to, nor vote on such studies when they are presented to the REB.

The NMREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 00000941.

---

**Ethics Officer,** on behalf of Vicky Hinson, NMREB Chair or delegated board member

**Ethics Officer to Contact for Further Information**

---

This is an official document. Please retain the original in your files.

---

Western University, Research
Appendix E
Curriculum Vitae

McKenzie Vanderloon

EDUCATION

Doctor of Philosophy (PhD) in School and Applied Child Psychology 2016-2020
Western University, London, Ontario
- Supervised under Dr. Jacqueline Specht, Canadian Research Centre on Inclusive Education
- Currently on clinical internship as part of the last milestone of the program
- Dissertation entitled, “A Longitudinal Perspective on the Development of Teacher Efficacy for the Use of Inclusive Practices Among Canadian Teachers”

Master of Arts in Developmental Psychology 2014-2016
Wilfrid Laurier University, Waterloo, Ontario
- Supervised under Dr. Kim Roberts, Child Memory Lab
- Thesis entitled, “Identifying an Unusual Occurrence of a Repeated Event”

Honours Bachelor of Arts Degree with Distinction 2010-2014
University of Guelph, Guelph, Ontario
- Majored in Psychology, minored in Family and Child Studies
- Semester Abroad in Paris, France Winter term 2013
- Honour’s Thesis entitled, “Long-term Effects of Inhibitory Devaluation” supervised under Dr. Mark Fenske

RESEARCH EXPERIENCE

Graduate Research Assistant 2016-2019
Western University, London, Ontario
- I worked for Dr. Jacqueline Specht at the Canadian Research Centre on Inclusive Education
- I was responsible for data input and transcribing interviews
- Responsible for aiding in data analysis using a concept called concept mapping

Research Assistant 2014-2016
Wilfrid Laurier University-Brantford Campus
- Worked for Dr. Catherine Stewart, Faculty of Human Rights and Criminology on a project entitled: “Seeking Justice for Child Abuse Victims with Developmental and/or Cognitive Disabilities: Perceptions of Parents and Crown Attorneys”
- Actively engaged with the community to recruit interested participants
• Participated in interviews conducted with parents and later transcribed the interviews

**Research Assistant**  2015-2016
Wilfrid Laurier University, Waterloo, Ontario
• Worked for Dr. Kim Roberts and Dr. Sonja Brubacher, Developmental Psychology
• Qualitatively analyzing data from a nationwide survey given to forensic interviewers to establish interview protocol that is being used with children who experience abuse

**Research Assistant (Volunteer)**  2014-2016
Child Memory Lab, Wilfrid Laurier University, Waterloo Ontario
• Conducted interviews with children in schools one-on-one to gather information regarding their memory of repeated events
• Maintained confidentiality, positive encouragement, and used strict interview protocols
• Facilitated activities at ‘BrainWorx’ summer camp that the lab ran during the summer

**Research Assistant (Volunteer)**  2012-2014
Dr. Mark Fenske’s Cognitive Psychology Lab, University of Guelph, Guelph Ontario
• Assisted with graduate student’s projects where explaining consent forms, remaining professional, and learning computer software was essential for participant recruitment

**Undergraduate Research Assistant (paid summer employment)**  Summer 2012
Dr. Margaret Lumley’s Clinical Psychology Lab, University of Guelph, Guelph, Ontario
• Awarded a very competitive paid research position for four months based on a formal interview, academic performance, research potential, and professional experience
• Assisted with data collection in public schools, transcribed interviews, helped conduct literature searches, and attended formal meetings with the school board alongside Dr. Lumley

**Research Internship (Course credit)**  Fall 2012
Dr. Deborah Powell’s Industrial/Organizational Psychology Lab, University of Guelph, Guelph, Ontario
• Coded interviews that were previously conducted by past researchers to ensure reliability was met
• Critically discussed research articles regarding various topics in Industrial/Organizational psychology

**Volunteer Research Assistant**  Fall 2012
PhD Candidate-Amanda Feiler in Industrial/Organizational Psychology Lab, University of Guelph, Guelph, Ontario
• Volunteered for five hours a week
• Provided instructions for research participants in the research lab
PUBLICATIONS


CONFERENCE PRESENTATIONS


AWARDS AND SCHOLARSHIPS

**Jessica Jean Campbell Coulson Research Award**

- Awarded based on a written research proposal addressing issues related to students with exceptionalities as well as having an average of 78% or better valued at $2,000 CAD

**Inclusive Education Research Award**

- Awarded based on research potential for conducting a PhD dissertation on a topic related to inclusive education valued at $750 CAD

**Joseph-Armand Bombarider Canada Graduate Scholarship**

- Awarded based on academic merit, research potential and communication skills valued at $17,500.00 CAD

**Dean’s Graduate Scholarship**

- Awarded to students in research-intensive master’s programs who hold an external award valued at $5,000 CAD
Laurier Graduate Scholarship  2014-2015
Wilfrid Laurier University, Waterloo, Ontario
- Awarded on competitive basis to full-time entering or continuing graduate students who achieve high academic standing in their program valued at $3,000 CAD

Guelph Accessibility Scholarship  2010-2014
University of Guelph, Guelph, Ontario
- Awarded based on academic performance valued at $8,000 CAD

Procter & Gamble Scholarship  2010-2014
Procter and Gamble Inc, Toronto, Ontario
- Awarded on competitive basis in Nation-wide competition based on academic performance and a written essay valued at $8,000 CAD

University of Guelph Entrance Scholarship  2010-2011
University of Guelph, Guelph, Ontario
- Awarded to students with an incoming average above 90.0% valued at $3,000 CAD

Queen Elizabeth II Aiming for the Top Scholarship  2010-2011
Ontario Ministry of Training, Colleges, and Universities
- Awarded on a competitive basis to Ontario students who have shown academic excellence valued at $3,500 CAD

Brighton’s Mayor Award,  2010
Brighton, Ontario Municipality
- Awarded for high academic achievement (maintaining a 90.0% average) and community involvement
- Received $250 CAD with the award

CLINICAL EXPERIENCE

Psychology Intern  September 2019-August 2020
CBT Associates, Toronto, Ontario
- Supervised under Dr. Khush Amaria
- Work with clients from 3 to 21 years-old
- Provide social-emotional and mental health assessments
- Provide various intervention services including CBT and DBT skills
- Engage in parent consultation
- Participate in weekly group supervision as well as weekly training rounds
- Gain feedback and clinical knowledge through weekly individual supervision meetings

Psychology Intern  January 2020-August 2020
The Possibilities Clinic, Toronto, Ontario
- Supervised under Dr. Brenda Miles, pediatric clinical neuropsychologist
- Work with children and adolescents 6-18 years-old
- Provide psychoeducational and ADHD assessments
- Responsible for the entire assessment process including intake interviews, the assessment, interpreting data, and providing feedback to families
- Participate in weekly case consultations at team meetings with other psychologists and psychiatrists
- Engaged in one-on-one supervision with Dr. Miles on weekly basis

**Doctoral Practicum Student**

September 2018-April 2019

Child & Youth Development Clinic (CYDC), Western University, London, Ontario

- Supervised under Dr. Colin King, child school and clinical psychologist
- Work with children and adolescents 3-18 years-old
- Provide social-emotional, psychoeducational, and behavioral assessments
- Provide various intervention services including CBT and ACT
- Engage in consultation for clients, particularly with schools
- Facilitated an 8-week child anxiety group for children 8-10 years-old
- Facilitated an 8-week child self-regulation group for children 8-10 years-old
- Facilitated a weekly reading group for children 5-8 years-old

**Psychometrist**

May 2018-June 2018

Thames Valley District School Board, London, Ontario

- Responsible for conducting academic and social-emotional assessments
- In this role I engaged in consultation with school teachers and parents
- Ensured final reports were written clearly and accurately

**Doctoral Practicum Student**

September 2017-June 2018

Thames Valley District School Board, London, Ontario

- Supervised under Dr. Pauline Richards, school psychologist
- Responsible for conducting psychoeducational assessments independently
- Interpreted assessment results and generated psychological reports
- Attended programming meetings with school staff and parents
- Attended and participated in providing feedback to parents and school staff
- Engaged in one-on-one supervision weekly with Dr. Richards

**Doctoral Student**

June 2017-April 2018

Gilpin and Associates Private Practice, Mount Brydges, Ontario

- Supervised by Dr. Karen Bax, clinical psychologist
- Interacted with families and children ranging in age from 8-20 years old
- Participated in co-therapy using CBT
- Administered, scored, and interpreted several anxiety and depression measures
- Responsible for conducting, interpreting, and writing a psychoeducational assessment

**Doctoral Practicum Student**

January-August 2017

Mary J Wright Research & Education Centre, London, Ontario
• Participated in co-therapy, assessment, and consultation with supervising psychologist, Dr. Karen Bax
• Wrote clinical progress notes and final reports
• One-on-one supervision with Dr. Bax on weekly basis
• Helped facilitate a children’s group called “Busy bodies” weekly working with parents and children
• Conducted behavioural observations

Social skills group volunteer
Western University, London, Ontario
• Assisted in using Applied Behavioural Analysis therapy (ABA) with children who have Down’s Syndrome

TEACHING EXPERIENCE

Graduate Teaching Assistant
Wilfrid Laurier University, Waterloo, Ontario
Language Development (PS378) 2014-2015
• Attended weekly lectures, marked papers and examinations, and communicated with students via email and by appointment

Introduction to Statistics (PS296) Winter 2015
• Taught 80 minute weekly tutorials in a computer lab illustrating data analysis using SPSS, graded assignments and final exams, held office hours, and communicated with students via email

Research in Developmental Psychology (PS375) Fall 2014
• Coordinated with a local daycare where research took place, taught classes on ethics and APA, helped create grading rubrics, graded papers and assignments, held weekly office hours, and communicated with students via email