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Social-Emotional Competencies In Pre-service Teachers

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Abstract

Teachers' social-emotional competencies (SECs) are crucial elements to effectively facilitate the implementation of social-emotional learning (SEL) programs, the development of students' SECs, and their own capacity to manage job stress. However, there is little research on teachers' SECs, the factors that contribute to their development, and their relationship with teachers' psychological well-being. The two studies in this dissertation attempt to address research gaps in the literature on teachers' and pre-service teachers' SECs.

The first study aimed to develop a structured conceptualization of teachers' SECs and identify the competencies that pre-service teachers most value in the classroom. The second study examined possible predisposing factors (i.e., resilience, self-efficacy, empathy) that could be associated with the development of pre-service teachers' SECs. The second study also determined the effect of pre-service teachers' SECs on their levels of well-being over and above predisposing factors. In the first study, first-year pre-service teachers from the Social Emotional Learning course participated in a group concept mapping activity in the fall semester of 2018; 54 pre-service teachers completed the brainstorming activity in the first phase, but only ten volunteered for the second phase to sort, label, and rate statements. Results from the concept mapping activity indicated that pre-service teachers identified attributes such as teachers' communication, leadership, social traits, cognitive, and emotional skills, as well as their ability to build a learning community, create a learning community, and enhance their professional practice as descriptors of socially and emotionally competent teachers. Based on participant ratings, teachers' ability to model the behaviour they want their students to exhibit and their ability to establish positive communication with their students are viewed as the most valuable skills to facilitate the social-emotional learning curricula in the classroom. In the second study,

97 first-year pre-service teachers completed online surveys in the fall semester of 2017. Results from the online surveys revealed that pre-service teachers' resilience was a significant predictor of SEC levels and psychological well-being. In a similar manner to resilience, pre-service teachers' SECs were weak predictors of psychological well-being. However, after controlling for resilience, pre-service teachers' SECs were no longer predictors of psychological well-being.

Keywords: Social and emotional learning, social-emotional competencies, pre-service teachers, resilience, self-efficacy, empathy, psychological well-being.

Summary for Lay Audience

Teachers' social-emotional competencies, including the ability to identify and regulate emotions, establish positive relationships, and make responsible decisions are critical for students' social-emotional development. However, there is little research about teachers' social-emotional competencies and even less research focused on pre-service teachers' social-emotional competencies. For example, there is no consensus on the social-emotional attributes that teachers are expected to demonstrate in the classroom or the factors associated with the development of pre-service teachers' social-emotional competencies. Further, there is little information regarding how the levels of pre-service teachers' social-emotional competencies influence their levels of satisfaction with life in general.

Addressing research gaps in the literature in this area could provide a better understanding of the development of pre-service teachers' and in-service teachers' social-emotional competencies. This dissertation aims to identify the attributes that socially and emotionally competent teachers are expected to model in the classroom. Furthermore, the results of this dissertation may also assist in determining the social-emotional factors that could be targeted during teacher education to facilitate the development of pre-service teachers' social-emotional competencies and increase their levels of satisfaction. An additional objective is to assess the effect of pre-service teachers' social-emotional competencies on their levels of satisfaction with life in general.

The study population consisted of first-year teacher candidates from a university in southwestern Ontario. Participants completed online surveys and a concept mapping activity. In the concept mapping activity, participants made a list of the social-emotional attributes that expect to see in teachers. Then, they categorized and rated the attributes in terms of its

importance. The researcher used statistical analysis to identify social-emotional attributes and make predictions.

Dedication

I would like to dedicate this dissertation to all people who believed in me and support me throughout my Ph. D. journey. To my loving husband, Gerardo, whose priceless love, patience, and words of encouragement inspired the best of me. To my parents, brother, and sister-in-law, whose invaluable guidance and teachings have contributed to my personal and professional growth. Finally, and above all, I would like to express my infinite gratitude to God because without him, none of this would have been possible.

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Chapter 1: Introduction

The promotion of social-emotional learning (SEL) approaches in schools has required teachers to acquire new skills to foster social and emotional competencies in students (Jennings & Greenberg, 2009; Jones & Bouffard, 2012). Teachers must be socially and emotionally competent to model social-emotional competencies, but they often do not feel prepared to demonstrate their social and emotional competencies (SECs) or to implement SEL programs in the classroom (Greenberg, Domitrovich, Weissberg, & Durlak, 2017; Onchwari, 2010). The level of SECs displayed by teachers depends on the context in which they are required to demonstrate their expertise; therefore, a teacher may exhibit a high level of SECs in one context but require training or experience to thrive in another (Jennings & Greenberg, 2009). Consequently, the effectiveness of SEL programs could be limited, and students may not receive the intended program benefits.

Teacher candidates must be provided with opportunities to develop their SECs not only to be able to foster students' social-emotional skills, but also to help cope with the stress and dissatisfaction that they will encounter in their jobs (Gu & Day, 2007; Palomera, Fernandez-Berrocal, & Brackett, 2008; Weare, & Gray, 2003). Teaching is a demanding profession where teachers often face emotional situations that elicit unpleasant emotions such as frustration and stress. Vesely, Saklofske, and Nordstokke (2014) argued that developing emotional competencies in teachers can mediate stress, improve teachers' well-being, and prevent the adverse effects of teacher burnout (e.g., health-related problems, and negative teacher-student relationships and classroom climate). Thus, teachers' SECs are important for both students' and teachers' adjustment. This dissertation explores teachers' SECs through a combination of theoretical, mixed-method, and quantitative approaches.

1.1. Purposes of the Research

The objectives of these studies are the following:

1. to develop a structured conceptualization of teachers' SECs;
2. to identify the competencies that pre-service teachers most value in the classroom;
3. to examine possible predisposing factors that could be associated with the development of pre-service teachers' SECs; and
4. to determine the effect of pre-service teachers' SECs on their levels of well-being over and above predisposing social-emotional factors.

1.2. Significance

Despite research indicating that teachers' SECs influence teachers' stress levels and students' emotions and social skills, only a few studies have investigated teachers' social-emotional competencies. In the literature, there is no clear distinction between teachers' SECs and students' SECs. Although these competencies between these two population groups relate quite well, the overlapping and closely related concepts create confusion regarding what attributes a socially and emotionally competent teacher should demonstrate in the classroom. Therefore, a better understanding of the social and emotional attributes that teachers should demonstrate in the classroom to make their SEL practices more effective is required. Furthermore, the literature about the predisposing factors that could predict teachers' SECs is also scarce. Although attributes like resilience, self-efficacy, and empathy have been associated with SECs, it is necessary to examine whether these attributes could predict teachers' SECs in the classroom and how these attributes influence their psychological well-being.

The findings of this dissertation contribute to the limited research on the attributes associated with teachers' SECs and the relationship among teachers' predisposing factors, SECs,

and well-being. By exploring pre-service teachers' perspectives about the attributes that characterize socially and emotionally competent teachers, it may be possible to develop a structured conceptualization of teachers' SECs. A structured conceptualization of teachers' SECs might extend the understanding of the social and emotional competencies teachers need to teach and achieve SEL goals effectively. The results of this dissertation may also aid in identifying possible gaps in the pre-service teachers' knowledge pertaining to the social-emotional attributes that they are expected to exhibit in the classroom and the value they grant to such attributes. Additionally, by examining which predisposing social-emotional factors in pre-service teachers are directly associated with their SECs and psychological well-being, this study can provide evidence about the attributes that could be targeted in teacher education or SEL programs to facilitate the development of pre-service teachers' SECs. Furthermore, the results of this dissertation may also help to promote policies and practices to support the development of SECs in pre-service and in-service teachers.

1.3. Social and Emotional Learning

The Collaborative on Academic, Social, and Emotional Learning (CASEL) is an organization that promotes the development of academic, social, and emotional competencies in students through the SEL process. SEL is the process by which students develop social and emotional competencies, including self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (CASEL, 2015). Schools have thus incorporated SEL programs into their curriculums to facilitate the development of SECs in students (Elbertson, Brackett, & Weissberg, 2010). SEL programs had been found to produce positive effects on students' and teachers' social-emotional competencies, attitudes about

themselves, relationships with others, and ability to adapt to school (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Zins, Bloodworth, Weissberg, & Walberg, 2004).

1.4. Teachers' Social-Emotional Competencies

Given the critical role teachers play in promoting students' social and emotional development, teachers' SECs have started to received attention. In an attempt to define teachers' SECs, Jennings and Greenberg (2009) indicated that socially and emotionally competent teachers are able to recognize and regulate their emotions, develop care and concern for their students, establish healthy and supportive relationships with colleagues and students, and make responsible decisions and manage stressful situations in the classroom (Jennings & Greenberg, 2009). Teachers' SECs also refers to teachers' ability to design lessons that promote SEL concepts, promote students' motivation and cooperation, and act as role-models of pro-social behaviour (Jennings & Greenberg, 2009). Additionally, socially and emotionally competent teachers contribute to their students' psychological well-being, but also experience higher levels of well-being themselves (Cefai & Cavioni, 2013, p.136).

1.5. Pre-service Teacher Education

Research indicates that the integration of SEL in schools would be best achieved through coordinated efforts among agents of change, including family, school, and community (Durlak & Weissberg, 2011; Oberle, Domitrovich, Meyers, & Weissberg, 2016). Unfortunately, there is a gap between research and practice, and as a result, moving toward a systemic SEL approach seems a distant reality (Meyers et al., 2015). Teachers are typically held accountable for incorporating SEL into schools, but they receive little support and resources for implementing SEL programs (Jones, Bouffard & Weissbourd, 2013). Educational institutions around the world still have a bias toward believing that teachers should focus on the development of students'

cognitive and academic skills (Garcia, 2014). As a consequence, teachers often carry the burden of giving priority to students' cognitive development over the emotional and social development and feel conflicted about spending their time implementing an SEL program despite evidence indicating that students' emotional and social skills and academic success are interrelated (Hawkins, Kosterman, Catalano, Hill, & Abbott, 2008; Reyes, Brackett, Rivers, Elbertson, & Salovey, 2012).

Additionally, although teachers recognize the importance of developing social-emotional competencies in their students, they usually do not feel prepared to deal with this task. A study by Corcoran and Tormey (2012) determined that pre-service teachers from the third year of an undergraduate program and a one-year graduate diploma program in an Irish university had difficulty in perceiving emotions in themselves and others as well as understanding and analyzing emotional information. In another study, two-thirds of 87 pre-service teachers from a large state university in the U.S. had difficulty understanding and regulating their emotions. However, after participating in a mindfulness and SEL intervention program, they noticed improvements in their ability to perceive, understand, and regulate their emotions (Garner, Bender, & Fedor, 2018). Considering the limited support that teachers receive for the development of their SECs and the gaps in their abilities since the early stages of their career, teacher education can serve as a basis for teacher professional development and be part of a coordinated strategy to achieve SEL objectives(Reyes, Brackett, Rivers, Elbertson & Salovey, 2012).

Teacher education provides an opportunity for future teachers to learn about SEL and acquire new skills that will enable them to facilitate the integration of SEL in the classrooms. Furthermore, teacher candidates must receive SEL training and experience the practical

applications of SEL principles in different settings as part of their preparation program (Garner, Bender, & Fedor, 2018; Palomera, Fernández-Berrocal & Brackett, 2008; Schonert-Reichl, Kitil, & Hanson-Peterson, 2017). Providing pre-service teachers with experiences that increase their knowledge, skills, and confidence in their abilities will improve their SEL practices and job satisfaction (Jennings & Greenberg, 2009). Additionally, teacher education plays an essential role in addressing pre-service teachers' concerns regarding the implementation of SEL programs, as a way to promote their change readiness and help them to overcome any resistance to adopt new practices to promote SEL (Zimmerman, 2006).

1.6. Theoretical Perspectives and Methodology

CASEL has specified some elements that make the SEL process effective and proposed a comprehensive SEL framework, which is comprised of the student, the teacher, and the context. The comprehensive SEL framework identifies teachers as a critical element in the SEL process as they apply SEL concepts into daily practice, incorporate these concepts into the educational curriculum, and achieve SEL objectives (Schonert-Reichl & Hymel, 2007). This framework also emphasizes teachers' need to be socially and emotionally competent since students' SECs are influenced not only by teachers' pedagogical knowledge and skills but also by teachers' SECs (Jones & Bouffard, 2012). Teachers who are competent in regulating their emotions, empathizing with others, establishing healthy relationships, and making responsible decisions feel a higher degree of ownership over the implementation of SEL programs (Bridgeland, Bruce, & Hariharan, 2013). Additionally, teachers who have high levels of social-emotional competencies also have a higher likelihood of success in shaping a positive change within the school system regarding the promotion of SEL (Murray-Harvey & Slee, 2007).

One of the roles of teachers in the SEL process is to model social-emotional competencies in the classroom (Becker, Goetz, Morger, & Ranellucci, 2014). According to social cognitive theory, children acquire new patterns of behaviour by observing the behaviour of others, believing in their ability to imitate these behaviours, and having the confidence that by imitating these behaviours they would be rewarded (Bandura & Walters, 1977). In other words, teaching students social-emotional competencies will be more effective when teachers model social and emotional competencies according to the students' level of development and demonstrate to students the benefits of acquiring SECs (Reyes, Brackett, Rivers, Elbertson, & Salovey, 2012). However, teachers struggle to model SEL behaviours, which indicates that they must find ways to improve their SECs (Crooks, Chiodo, Zwarych, Hughes, & Wolfe, 2013).

Teachers' emotions also play a fundamental role in influencing students' social-emotional skills. The theory of emotional contagion suggests that emotions are transmitted among people in social interactions, and this process affects the dynamics of social interactions (Hennig-Thurau, Groth, Paul, & Gremler, 2006). This theory attempts to explain the influence that teachers' emotions have on their students' emotions and social behaviours in the classroom and the importance of teachers having a high level of SECs. According to Sutton & Wheatley (2003), the emotions that teachers experience in classroom influence how teachers' emotions are manifested during teaching, and (as the theory of emotional contagion proposes) determines their students' emotions, social behaviour, and learning outcomes. Students' emotional responses and the way they relate to their teachers are influenced not only by instructional approaches but also by how students perceived their teacher emotionally reacted to situations (Zembylas & Schutz, 2009). Therefore, teachers need to have proper SECs to recognize the effect that their emotions have on their students and be able to effectively regulate their emotions to transmit positive emotions to

their students and emotionally prepare students for learning (Frenzel, Goetz, Stephens, & Jacob, 2011).

Teachers would also be more likely to transfer social-emotional competencies to their students when students feel an intrinsic motivation to learn these competencies (Brackett & Rivers, 2014). Students' intrinsic motivation could be influenced by teachers' ability to establish supportive relationships with their students, provide them opportunities to practice social-emotional skills, and enable them to use self-direct learning (Brackett & Rivers, 2014). However, teachers need to feel motivated first to feel more responsive to their students' social and emotional needs (Martinek,2012). The self-determination theory indicated that teachers' motivation and social context play an important role in achieving SEL objectives. Teachers who believe in their ability to influence students' learning, experience a sense of autonomy in their profession, and feel supported by the school system, feel more motivated to learn about SEL and implement SEL strategies (Orsini, Evans, & Jerez, 2015). Kaplan & Madjar (2017) also suggest that pre-service teachers might feel more motivated to improve their competencies by allowing them to try different teaching strategies during their practicum and providing opportunities to work collaboratively with others. Pre-service teachers might also feel motivated to gain more knowledge about SEL and improve their SECs when given opportunities to apply theoretical knowledge to real cases through problem-based learning (Koludrović & Ercegovac, 2015).

1.7. Methodology

In this dissertation, pre-service teachers' perspectives were examined through two different but related studies. In the first study, a concept mapping methodology, which is a mixed-methods participatory approach, was used as a statistical technique to provide a structured conceptualization of pre-service teachers' ideas (depicted as a visual map of clusters) and

demonstrate how these ideas are interrelated and organized in groups (Trochim, 1989). In this method, participants were involved in three tasks where they: 1) brainstormed their ideas in response to a focus statement, 2) grouped their ideas into categories, and 3) rated each idea in terms of its importance. After rating the ideas, the data were entered into the Concept Systems Global MaxTM software. Concept maps were generated through a mathematical process of multidimensional scaling and hierarchical cluster analysis in which the participants' ideas with similar meanings are clustered together, and ideas with different meanings are further from each other on the map (Hackett et al., 2016). This method was used due to its flexibility as it allowed to modify the different tasks of the process (brainstorming, sorting, and rating) according to the needs of the study (Anderson, Day, & Vandenberg, 2011; Aspelin, 2019; Trochim, 1989).

In the second study, a quantitative approach, which was descriptive and non-experimental, was used for evaluating the extent to which predisposing social-emotional factors (i.e., resilience, self-efficacy, and empathy) could predict SECs in the classroom among pre-service teachers. It was also used to determine whether SECs in the classroom could predict levels of psychological well-being over and above predisposing social-emotional factors. A quantitative approach was used because it was a suitable tool to quantify pre-service teachers' perspectives and use that information to establish relationships among the variables and predict the effect of one variable over another (Eyisi, 2016). By collecting data through standardized online surveys, it was also possible to obtain responses from a relatively large sample of pre-service teachers in a short time for a reasonably low cost and reduce bias (subjectivity) when analyzing data (Eyisi, 2016). However, using online surveys to collect data entails some limitations, such as the potential for dishonest responses or missing data (Rice, Winter, Doherty, & Milner, 2017).

1.8. Dissertation Summary

In Chapter 2 of this dissertation, a review of the theoretical and empirical literature regarding the role of teachers in the SEL process, the factors related to the development of pre-service teachers' SECs, and their psychological well-being is presented. The conclusions from Chapter 2 strongly support the need for further research regarding pre-service and in-service teachers' SECs, particularly to develop a broader conceptualization of teachers' SECs and identify the factors that facilitate the development of SECs and psychological well-being in pre-service teachers.

In Chapter 3, "Pre-service teachers' perspectives on the attributes of socially and emotionally competent teachers," pre-service teachers' perspectives about the attributes that characterize socially and emotionally competent teachers were examined through a group concept mapping method. A structured conceptualization about teachers' SECs is provided along with a list of competencies that pre-service teachers most value in the classroom. Pre-service teachers perceived a broader set of social and emotional attributes such as teachers' communication and leadership skills as well as attributes that help to foster a positive classroom climate and a learning community. Attributes such as teachers' ability to model SECs and establish good communication with their students were regarded as the most valuable skills to facilitate the social-emotional learning curricula in the classroom.

In Chapter 4, "Predisposing Social-Emotional Factors and the Role of SECs in Psychological Well-Being," I examined the extent to which predisposing social-emotional factors predict pre-service teachers' SECs. It also was examined whether pre-service teachers' SECs could predict levels of psychological well-being over and above predisposing social-emotional factors. The findings in Chapter 4 indicate that resilience significantly predicted SECs. With regard to

predicting psychological well-being, pre-service teachers' resilience was a significant, albeit a weak predictor while teachers' SECs were not significant predictors of psychological well-being after controlling for resilience. Finally, Chapter 5 presents the general findings and contributions of this research as well as the implications for future advocacy and research to address the need for the professional development of teacher candidates.

1.9. Conclusion

Teachers must develop their SECs to be able to demonstrate and transfer social-emotional competencies to their students. Although prior literature emphasizes the central role that teachers' SECs have in the SEL process, there is no consensus on the attributes related to teachers' SECs, the factors that contribute to the development of SECs in teachers, and the relationship among teachers' SECs and psychological well-being. By adopting the comprehensive framework proposed by CASEL as a reference to understand the role of teachers in the SEL process and using a mixed-method approach (i.e., online surveys and concept mapping methodology), this dissertation contributes to the development of a structured conceptualization of teachers' SECs and the identification of attributes that facilitate the development of pre-service teachers' SECs and their well-being.

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Chapter 2: Literature Review

Schools have recently begun to implement SEL programs to promote the development of children's social and emotional competencies as these competencies are associated with academic success, prosocial behaviours in the classroom, and students' well-being (Elias et al., 2003; Rosenthal & Kaye, 2005; Zins & Elias, 2007). This process of developing children's SECs has been promoted by the Collaborative for Academic, Social, and Emotional Learning (CASEL), an organization dedicated to disseminating research on SEL (Greenberg, Domitrovich, Weissberg, & Durlak, 2017). SEL emphasizes five core competencies, including recognizing and regulating emotions, understanding social situations, establishing positive relationships, and making responsible decisions (Jennings & Greenberg, 2009). These social and emotional competencies are explicitly taught at schools through the implementation of evidence-based SEL programs.

Currently, there are a variety of evidence-based SEL programs such as Second Step (Frey, Hirschstein, & Guzzo, 2000), Roots of Empathy (Gordon, 2005), Promoting Alternative Thinking Strategies (Greenberg, Mihalic, & Kusché, 1998), and the Fourth R (Crooks, Wolfe, Hughes, Jaffe, & Chiodo, 2008). A meta-analysis of school-based SEL programs indicated that these programs increase prosocial behaviours and improve students' relationships (Durlak et al., 2011). Evidence-based SEL programs have also been demonstrated to improve students' mental health and reduce social withdrawal and symptoms of distress, depression, and anxiety (Bridgeland, Bruce & Hariharan, 2013). Further, studies indicate that the implementation of evidence-based SEL programs has positive effects on students' academic performance, and these impacts have found to be long-lasting (Durlak et al., 2011; Taylor, Oberle, Durlak, & Weissberg, 2017). As a result of the benefits provided by the SEL programs, educational reforms are being

implemented to integrate SEL in schools as a common practice to promote, develop, and reinforce appropriate SECs among students (Elias et al., 2003; Weissberg & Cascarino, 2013; Zins et al., 2004).

One of the steps to fully integrate SEL in schools includes the development of a caring, supportive, and well-managed learning environment (Zins & Elias, 2007). This type of learning environment, commonly called a healthy school climate, provides the foundation for SEL (Cohen et al., 2009; Osher et al., 2016). One fundamental dimension of the school climate that strongly influences students' social-emotional behaviours is the relationships among teachers and students (Cohen et al., 2009). Evidence suggests that students feel strongly connected to their school and exhibit more prosocial behaviours when their teachers demonstrate caring, respectful, and supportive attitudes toward them (Orpinas & Horne, 2009).

Teachers influence students' behaviours and emotions in their daily interactions and become a source of inspiration and role models for students when they develop strong relationships with them (Matson, 2017; Oberle & Schonert-Reichl, 2016; Huitt, 2009). Teachers' self–regulation and social skills facilitate the maintenance of healthy relationships with their students and, through these teacher-student interactions, students learn to manage their emotions and interact with their peers (Cadima, Verschueren, Leal, & Guedes, 2016). However, when teachers have difficulty managing their emotions, the stressful demands of their job may affect their well-being and have an impact on teacher-student relationships (Oberle & Schonert-Reichl, 2016). Teachers who experience stress and burnout are less responsive to students' needs, have more difficulty in connecting to students, and find less satisfaction in their job (Jennings & Greenberg, 2009). As the quality of teacher-student relationships largely depends on teacher's competencies, supporting the development of teachers' social and emotional competencies may

prevent them from the adverse effects of burnout (Brackett et al., 2011; Oberle & Schonert-Reichl, 2016; Teven, 2007). Research is beginning to recognize the role of teachers' SEC in the promotion of students' SECs and well-being, but also in their own professional development and psychological and physical health (Elias et al., 2003).

2.1. Toward a Systemic Approach of SEL

CASEL has recognized the crucial role of teachers in the effectiveness of SEL programs, and as a result, it suggests a comprehensive and systemic approach for maximizing SEL programs' benefits (Devaney, O'Brien, Resnik, Keister, & Weissberg, 2006). A systemic approach to SEL emphasizes the participation of the entire school community in the SEL process as a means to integrate SEL practices into the school context (Jones & Bouffard, 2012). It also highlights the importance of moving away from the mindset of developing students' SECs by simply relying on the delivery of the components of the SEL programs to one that focuses on a collaborative effort, where schools, families, and communities work together to reinforce SEL skills in students. SEL objectives will be effectively achieved when different sectors of the community assume responsibility and work together to develop a research-based plan to promote SEL, find resources, and invest in developing skills in all the members of the community, particularly teachers (Chaskin, 2008; Oberle, Domitrovich, Meyers, & Weissberg, 2016; Short, 2016). This capacity of the community to collaboratively address a social issue is considered part of a resilient response that may also increase well-being among their members (Chaskin, 2008).

Establishing a systemic approach to facilitating the integration of SEL in schools requires a more complex analysis of the various interactions that occur daily in schools. From this perspective, students' relationships with their teachers are one of the most important factors that have been demonstrated to influence students' outcomes and are considered to be the foundation

for understanding students' behaviour in the classroom. It is through relationships with teachers that students learn to modulate their emotions, adjust their behaviour to the rules, and effectively interact with others (Maldonado-Carreño &Votruba-Drzal, 2011). Some theories, such as the zone of proximal development, which was articulated by Vygotsky (1987), explain how the interaction between students and teachers affects students' learning by proposing that children attain their next level of development through adults' guidance. Schonert-Reichl and Hymel (2007) supported this theory by arguing that meaningful learning occurs when students establish a relationship of collaboration with their teachers. In a study by Roorda et al., the relationship of collaboration between teachers and students influenced students' school engagement and academic outcomes.

The theory of self-determination indicates that students need a caring and safe environment that provides them with social and emotional resources to meet their needs for autonomy, competence, and relationship to feel more motivated to learn new skills (Brackett & Rivers, 2014). An SEL intervention that was based on the theory of self-determination proved to be effective in training teachers to support student autonomy, improve their communication skills and encourage them to play an active role in their learning (Talvio et al., 2013). This theory also suggests that teachers should be more receptive to their students' social and emotional needs (Koludrović & Ercegovac, 2015). However, teachers' dispositions towards their students are typically moderated by the social context and their perception of how the work environment meets their needs (Orsini, Evans, & Jerez, 2015). Teachers feel the need to establish supportive relationships, grow professionally within the school system, and make independent decisions about planning and teaching within their classroom (Gorozidis & Papaioannou, 2016). Teachers would feel more motivated to achieve educational objectives when they are part of a

collaborative school environment, feel competent, and are allowed to decide their participation in school initiatives (Gorozidis & Papaioannou, 2016; Hascher & Hagenauer, 2016).

Students' outcomes and emotional responses are also influenced by how they perceive teachers' emotions. The theory of emotional contagion suggests that not only learning can be transmitted through social interactions but also emotions (Hennig-Thurau, Groth, Paul, & Gremler, 2006). In other words, individuals' emotions and behaviours have a continuous influence on others (Barsade, 2002). In the education field, the theory of emotional contagion provides insight into the significant influence that teachers have over their students' emotions, social behaviours, and cognitive performance in the classroom. Teachers are often displaying a range of emotions in the classroom and their students' behaviour changes accordingly with their teachers' emotions (Sutton & Wheatley, 2003). This process, in turn, determines the way that teachers and students relate emotionally and trust each other (Zembylas & Schutz, 2009).

In a study designed to explore this theory, teachers' emotions influenced their students' emotions by direct unconscious processes such as emotional contagion or consciously through empathy (Becker, Goetz, Morger, & Ranellucci, 2014; Oberle & Schonert-Reichl, 2016). Therefore, teachers' emotions play a significant role in students' emotions, and when teachers recognize and regulate their emotions in the classroom, their teaching becomes more effective (Immordino-Yang & Damasio, 2007; Frenzel, Goetz, Stephens, & Jacob, 2011).

Another theory that broadens the scope of the systemic approach is the social cognitive theory, coined by Bandura (1977). In a social experiment, Bandura noticed that adults' behaviour serves as a reference for children and determines their later behaviours. In his theory, Bandura (1977) states that individuals learn and acquire new patterns of behaviour through observing the behaviour of others and by following their example. According to this theory, teachers could

influence students' social and emotional behaviours by modelling the targeted behaviours (Becker et al., 2014). Thus, students' SECs are influenced not only by teachers' pedagogical knowledge and skills but also by teachers' SECs (Jones & Bouffard, 2012).

Furthermore, Jennings and Greenberg (2009) argue that teachers' SECs are crucial for the effective implementation of SEL programs. Teachers need to be socially and emotionally competent to model these competencies to their students and successfully develop their students' SECs (Weissberg et al., 2013). Based on the above considerations, teachers play a fundamental role in students' social and emotional learning, and that learning is likely to be more meaningful if teachers are responsive to the emotional and social needs of their students and are competent in modelling social-emotional skills (Hinton, Miyamoto, & Della Chiesa, 2008; Jennings & Greenberg, 2009; Oberle & Schonert-Reichl, 2017).

The social and emotional demands in the classroom require teachers to have the competencies to develop and sustain positive relationships with their students, support students' SEL, and protect themselves from burnout (Jennings & Greenberg, 2009). For example, teachers' ability to regulate their emotions influences the quality of teacher-student relationships by shaping students' emotional and behaviours (Poulou, 2017). Teachers that usually feel pleasant emotions are more likely to use diverse and stimulating teaching strategies that promote pleasant emotions in their students; conversely, teachers that usually feel unpleasant emotions in the classroom have a negative impact on their students' creativity, emotions, and behaviours (Sutton & Wheatley, 2003; Frenzel, Goetz, Stephens, & Jacob, 2011; Brock & Curby, 2014). Students are also more receptive to learning emotional and social skills in the classroom when they observe teachers managing stressful situations and using dialogue to solve conflicts (Jones, Bouffard, & Weissbourd, 2013). According to Jennings and Greenberg (2009), teachers have the

potential to be outstanding role models of positive social and emotional behaviour, and their social-emotional competencies contribute to creating a healthy classroom climate that provides students a suitable environment to develop their social-emotional behaviours and improve academic outcomes.

2.2. Importance of teachers' SECs

Teachers' SECs can be defined as teachers' ability to recognize and manage their own emotional responses in the classroom, establish healthy relationships within the school community, and make effective decisions to benefit their own and students' well-being. A global conceptualization of teachers' SEC's also involves the ability to apply SEL concepts into daily practice and incorporate those concepts into the educational curriculum. The SECs that teachers display in the classroom will lead to a positive change in students' social behaviours and emotions and contribute to a healthy school climate, which in turn will have a positive impact on teachers' well-being (Weare, 2000). According to Jennings and Greenberg (2009), teachers who are socially and emotionally competent are effective at identifying their own and their students' emotions, recognizing how these emotions affect their interactions with their students, and regulating their emotions to maintain a positive relationship with their students and cope effectively with many stressors inherent to the profession. Socially and emotionally competent teachers also know how to establish a supportive and encouraging relationship with their students, be sensitive to their social and emotional needs, demonstrate fairness during interactions with students, and model prosocial behaviour in the classroom (Jennings & Greenberg, 2009). Other behaviours that are characteristic of socially and emotionally competent teachers include, but are not limited to, making responsible decisions that benefit the social and emotional development of their students, using diverse teaching strategies to boost the academic

success of students, and coaching students in difficult situations faced in the classroom (Jennings & Greenberg, 2009).

Teacher education and SEL training programs have not yet considered the development of teachers' SECs as a priority despite research indicating that teachers' SECs have a positive influence in the classroom climate, increase the quality of implementation of SEL programs, and improve student SEL outcomes (Jennings & Greenberg, 2009; Jones, Bouffard, & Weissbourd, 2013). The perceived low interest of the educational system in teachers' professional development in SEL practices may affect teachers' levels of engagement in SEL interventions (Brackett, Reyes, Rivers, Elbertson & Salovey, 2012). Teachers typically receive little instruction and support for effectively fostering students' social and emotional development in the classroom, and even less training and support for the development of their SECs (Jones, Bouffard & Weissbourd, 2013). Although teachers recognize their responsibility to deliver the SEL program effectively, they frequently feel incapable of accomplishing this requirement (Boulton, 2014). When teachers do not feel confident about their ability to apply SEL concepts in the classroom, they are less likely to integrate SEL practices into school routines (Damschroder, Aron, Keith, Kirsh, Alexander, & Lowery, 2009). Teachers' believes and expectations about SEL also influence the effort and time they spend in teaching SEL concepts (Lee, Yang, & Zuilkowski, 2018). In this regard, professional development that has the objective to increase teachers' knowledge about the benefits of social-emotional learning and improve their SECs may increase their willingness to implement SEL in the classrooms and the success of the SEL implementation (Wanless & Domitrovich, 2015).

2.3. Social-emotional learning in pre-service teachers' education

The rising number of teachers leaving the profession due to dissatisfaction and stress indicates that teachers need to acquire or improve the competencies required to succeed in the teaching profession (Corcoran & Tormey, 2012). Teachers recognize their own need for acquiring the necessary skills that help them to meet the demands imposed on them, but they typically feel that they are not fully prepared to deal with these challenges. Thus, pre-service teacher education is the teachers' starting point for learning how to manage and react to stressful situations and for receiving the support they need to develop their full potential. Jennings and Greenberg (2009) stated that pre-service education could become a place where social and emotional development becomes a goal to achieve to improve teachers' SECs and the effectiveness of the implementation of SEL programs.

A study by Corcoran and Tormey (2012, p. 11) demonstrated that "pre-service teachers' levels of emotional intelligence were below the mean for the wider population, particularly in the area of emotional awareness (i.e., perceiving and understanding emotions)." Given their need for skills to manage the demand of the profession and the high levels of stress reported by teachers, pre-service teacher educators should consider the development of emotional and social competencies in teachers as a priority to improve the quality of education. However, the development of SECs in teacher candidates remains a low priority in teacher education programs (Waajid, Garner, & Owen, 2013). Current SEL training programs for in-service teachers and teacher candidates may provide strategies about how to develop social and emotional competencies in children, but they do not support the development of teachers' SECs (Jennings & Greenberg, 2009).

2.4. Factors associated with teachers' SECs

Teachers' SECs vary from context to context and from person to person, which increases their feelings of inadequacy and compromise the teachers' ability to promote prosocial behaviours in their students, develop a positive classroom climate, and manage their own stress (Jennings & Greenberg, 2009; Zins et al., 2004). In other words, there are contextual and individual factors (e.g., dispositional factors) that limit teachers from consistently promoting the development of SECs in their students (Martella et al., 2013; Halberstadt, Denham, & Dunsmore, 2001). Examples of dispositional factors include but are not limited to emotional intelligence, empathy, self-efficacy, and resilience. Evidence suggests that these dispositional factors may have a major role in predicting SECs in teachers (Eisenberg, 2001).

2.5. Emotional intelligence as a foundation for developing SECs

Emotional intelligence (EI) is a construct that highlights the interdependence between cognition and emotions and the importance of emotional processes in thinking and decision-making (Dolev & Leshem, 2016). EI is defined as a "cluster of abilities that allow an individual to perceive emotions on himself and others, generate and use emotions in a cognitive process, understand emotions and emotional knowledge, and reflectively regulate emotions promoting emotional and intellectual growth" (Mayer, Salovey, & Caruso, 2004, p. 197). Research indicates that higher EI has a positive impact on the emotional, social, and cognitive development of teachers and increases their likelihood of success in the classroom setting (Goleman, 2003; Vesely, Saklofske, & Nordstokke, 2014). The degree of EI an individual possesses can be a decisive factor in their personal, social, and professional performance. On a personal level, studies have demonstrated that an individual with high EI has a better perception of his/her own emotions and other people's emotions; possesses the ability to use, understand, and regulate

those emotions better than others; solves emotional problems using less cognitive effort; and exhibits better performance in social and cognitive intelligence metrics (Mayer, Salovey, & Caruso, 2004; Yin, Lee, & Zhang, 2013).

Additionally, EI was associated with a decrease in perceived and physiological stress levels (e.g., cortisol levels decreased), and an improvement in their physical and psychological levels of well-being and the quality of their social relationships (Kotsou et al., 2011). On the social level, studies indicate that individuals with high EI tend to be more prosocial, effectively manage their relationships with others, and engage in more positive social interactions (Márquez, Martín, & Brackett, 2006; Hagenauer, Hascher, & Volet, 2015). For instance, emotionally intelligent teachers exhibit higher empathy toward their students and have better interactions with those students (Vesely, Saklofske, & Nordstokke, 2014). Professionally, EI promotes resilience against increased stress and has a strong positive correlation with teacher efficacy factors such as leadership, motivation, and communication (Vesely, Saklofske, & Nordstokke, 2014).

The concepts of EI and emotional competencies (EC) are used somewhat interchangeably. Many researchers have attempted to differentiate these two concepts, but the overlaps in their meanings still exist (Lau & Wu, 2012). Vaide & Opra (2014) suggested that EI is the foundation for developing EC, indicating that people with high EI have the capacity to learn and develop certain competencies. Thus, “EI enhances the potential for learning, and EC translates that potential into task-mastering capabilities” (Abraham, 2004, p. 119). Seal and Andrews-Brown (2010) further clarified the relationship between the two constructs by stating that EI includes emotional abilities representing the potential capacity of the individual to perceive and process emotional information, while EC (an extension of EI) includes the actual

utilization of emotional behaviours to recognize and regulate his own emotions and other people's emotions. Accordingly, EI (potential capacity) has a moderating effect on the mediated relationship of emotional quotient (score on a standardized test) and EC (actual behaviours) on performance outcomes (Seal & Andrews-Brown, 2010). In summary, although EI and EC are closely related, these are different constructs that are complementary for achieving effective social-emotional performance. Therefore, programs targeted to develop emotional competence should also be targeted to develop emotional intelligence as a prerequisite and thus promote the foundations for emotional competence (Vaida & Opre, 2014).

2.6. Empathy and its relationship with teachers' social competencies

Empathy has been widely associated with SECs and is defined as an ability to understand other people's emotions, perspectives, or situations to communicate that understanding through actions and connect with people (Swan & Riley, 2015; Feshbach & Feshbach, 2011). According to Sallquist et al. (2009), empathy may have a transactional relationship with social competencies in which empathy facilitates social interactions, producing positive emotions, and consequently motivating the individual to be empathetic. Empathy is also related to some SECs, such as emotional awareness, social awareness, and effective social communication. Emotional awareness facilitates having empathy with others by helping individuals to identify their emotions, while social awareness enables empathy by helping individuals to understand other people's emotions. Additionally, effective social communication skills facilitate empathetic behaviour by helping individuals to establish emotional connections with others (Izard et al., 2011). Empathy was also associated with emotional intelligence as both facilitate social relationships and collaboration (Serrat, 2017). Research indicates that emotionally intelligent people have consistently higher scores for empathetic perspective-taking (i.e., ability to identify

and understand other people's perspectives and emotions), which is considered an emotionally adaptive behaviour (Schutte et al., 2001).

In the school context, teachers' empathy helps to build a strong relationship with students by helping teachers to identify students' feelings, put themselves in their students' place, and communicate their support to students (Tettegah & Anderson, 2007). Expressing concern and understanding of students' feelings helps to develop a strong connection between students and teachers, sets the stage for prosocial behaviours and positive interactions in the classroom, and increases students' engagement in learning activities (Cooper, 2004; Feshbach & Feshbach, 2011; Izard et al., 2001). However, empathic teachers might suffer from emotional exhaustion when they have a strong emotional connection with their students and fully engage in interactions with students with emotional problems. Therefore, "it is vital to help teachers understand that although empathy is one of their key competencies, it may also lead to negative consequences" (Wróbel, 2013, p. 589).

2.7. The role of self-efficacy in teachers' emotional regulation

Research has recognized the influence that individuals' self-efficacy has on thoughts, social behaviours, and emotional arousal (Bandura, 1982; Kokkinos & Kipritsi, 2012). Self-efficacy has been defined as the perception that an individual has on his/her abilities and the confidence that those abilities will help him/her to achieve specific goals (Bandura, 1977). According to Bandura (1993), poor performance in a task is usually an indicator of an individual's lack of competence or inadequate self-efficacy in his/her own competencies. Self-efficacy influences an individual's social development and emotional regulation (Schwarzer, 2014). For example, people with high self-efficacy have a better psychological adjustment in a social context by approaching people with a more confident attitude (Kokkinos & Kipritsi,

2012). Self-efficacy also plays an important role in emotional regulation (particularly when feelings of anxiety and a depressive mood emerge) by helping individuals to perceive themselves as being able to cope with difficult situations and to face challenges with a positive mindset (Schwarzer, 2014).

Self-efficacy is essential in the teaching process (Senler, 2016). Teachers need to feel confident in their abilities and believe that they are able to positively influence their students' behaviour and life for teachers to feel motivated and feel happy pursuing their educational goals. Believing in one's competence will foster the intrinsic motivation of the individual and feelings of satisfaction towards his/her tasks (Ryan & Deci, 2000). Evidence indicates that teachers with high levels of self-efficacy are more engaged in social interactions, display more motivation to face the challenges in the school environment, and enjoy more their jobs (Skaalvik & Skaalvik, 2010). Further, job satisfaction is a factor that has been associated with low levels of teacher burnout because the individuals believe in their ability to change their circumstances and pursue favorable conditions that lead them to be satisfied with their job (Caprara, Barbaranelli, Steca, & Malone, 2006; Skaalvik & Skaalvik, 2010). Therefore, variations in self-efficacy may strengthen or weaken the outcomes that result from the competencies of an individual (Bandura, 1993).

2.8. Resilience as a protective factor

Emotional intelligence, social competence, and empathy are concepts that have been related to resilience (Kinman & Grant, 2011). Resilience is defined as the ability for adaptation, despite experiencing difficult circumstances (Luthar & Cicchetti, 2000). This term implies the ability of an individual to use several protective resources (e.g., dispositional attributes, empathy, social competencies, and social support) and a variety of adaptive coping strategies (e.g., problem-solving, grit) to face negative circumstances with the goal of increasing psychosocial

and behavioural adjustment outcomes (e.g., job satisfaction, well-being) (Mansfield et al., 2016). Resilience also implies the capacity for individuals to accept the support of others, establish secure connections with people, and strive toward personal or collective goals (Connor, 2006).

In an everyday context, resilient people exhibit high levels of self-efficacy, regulate their emotions to recover from negative experiences, and have a solution-oriented mindset (Connor, 2006). Resilient people are also more capable of adapting to change, view negative circumstances as challenges, and make use of internal and external resources when facing challenges (Friborg et al., 2003).

In the school context, resilience helps teachers to manage the daily demands of the school setting and to achieve their professional and personal goals. Teachers with low levels of resilience have a higher likelihood of experiencing burnout, maladjustment, and lack of motivation (Leroux & Théorêt, 2014). On the other hand, teachers with high levels of resilience adjust better psychologically and feel more motivated to develop their competencies when confronting a problematic situation in the classroom (Leroux & Théorêt, 2014). Resilience also plays a role in teachers' physical and mental health, the quality of student-teacher relationships, the quality of the learning environment, and the sense of satisfaction in their jobs (Gibbs & Miller, 2014; Luthar & Cicchetti, 2000). Boullet et al. (2014) indicate that resilience and mental health are interconnected and suggest that teachers' resilience is one of the factors that could influence the developing of students' SECs.

2.9. Teachers' psychological well-being and burnout

Teaching is a demanding profession, where teachers continuously face emotional situations that generate unpleasant emotions such as frustration and stress. In this regard, "the nature of their job requires dealing with their own emotions, as well as those of students, parents,

colleagues, and administrators" (Brackett & Katulak, 2006, p.4). The continued exposure to students' high levels of stress, anger, and bullying (Centeio et al., 2015) has the same negative impact on teachers' mental health that it has on students (Minero, 2017). Without appropriate regulation of emotions, prolonged exposure to high levels of stress may eventually lead to teacher burnout, and consequently, it will jeopardize teachers' well-being, a healthy classroom climate, and consequently, students' mental health (Jennings & Greenberg, 2009). Milfont et al. (2008) examined the association between burnout and well-being and indicated that both are negatively correlated: high levels of stress and burnout are usually associated with low levels of well-being and vice-versa. Stress, burnout, and poor management of emotions continually rank as the primary reasons why teachers become dissatisfied with the profession and end up leaving their positions (Skaalvik & Skaalvik, 2016).

Teachers' well-being and teachers' burnout are influenced by factors that help teachers to cope with work demands such as job satisfaction, teachers' self-efficacy, and teachers' competencies (Pillay, Goddard, & Wilss, 2005). Vesely, Saklofske, and Nordstokke (2014) proposed that the emotional competencies rooted in the concept of emotional intelligence (EI) can mediate stress, improve teachers' well-being, and prevent the adverse effects of teachers' burnout (e.g., health-related problems, negative teacher-student relationships, and classroom climate). "In particular, the dimensions of self-awareness and self-management appear to influence a teacher's ability to cope with the emotional demands of teaching" (Jennings & Greenberg, 2009, p. 497). Therefore, teachers' social and emotional competencies will help them to manage the high levels of stress that they face on a daily basis, address their cognitive, emotional, social, and physical needs, and as a result, improve their sense of well-being.

2.10. Conclusion and implications for practice

The systemic framework identifies teachers' SECs as an essential element of the students' social context that has the potential to support the SEL process, improve the classroom climate, and promote the development of social-emotional competencies in students. Furthermore, teachers' SECs could help to manage and reduce their own levels of occupational stress. However, the role of teachers' SECs is often overlooked, and it is usually assumed that teachers already have the competencies to manage the stress of the profession and model SEL behaviours to their students. Under the systemic framework and consistent with the self-determination theory, the goal for the educational system should not be only to train teachers to implement SEL programs to develop students' SECs but also to ensure teachers and pre-service teachers feel supported and have the resources they need to build their social-emotional competencies and integrate SEL strategies effectively into their daily practices. Future teachers should be able to demonstrate a certain level of social-emotional competence that will allow them to solve problems related to the profession, to effectively manage the stressful demands of the job, and to achieve both academic and SEL objectives (Palomera, Fernández-Berrocal & Brackett, 2008).

According to Waajid, Garner, and Owen (2013), SEL can be successfully integrated in a course offered in a teacher education program and by doing so, 1) pre-service teachers would feel motivated to learn more about SEL and develop their competencies; 2) pre-service teachers would recognize that emotions and academic learning are correlated; and 3) pre-service teachers would receive the support to learn how to incorporate SEL techniques in the classroom setting. In this way, when teacher candidates obtain a teacher position, they will have the capacity to implement SEL in their classrooms. For example, teachers will be able to promote social skills by establishing a positive relationship with their students and modeling how to solve conflicts in

the classroom when any social problem arises. Further, teachers encounter negative situations or events that increase their levels of stress. Therefore, teacher candidates and in-service teachers should receive support to strengthen their SECs, particularly through effective approaches such as coaching and mentoring (Jones & Bouffard, 2012).

There are several implications of prioritizing the SEC development of pre-service teachers. Firstly, to begin integrating the systemic approach into the SEL process, it is important to evaluate teacher candidates' SECs, since doing so would address the misconceptions about teacher candidates' readiness to implement SEL programs. Secondly, analyzing how teacher candidates' levels of SECs affect their psychological well-being would promote policies and practices to support the development of SECs in pre-service and in-service teachers. Thirdly, little is known about the factors that lead to the development of teachers' SECs. Identifying the factors that lead to the development of teachers' SECs would assist in improving pre-service teacher education and SEL training programs. The simple delivery of a training program for teachers and pre-service teachers aimed at teaching the components of SEL programs may not be as effective as a training program that instructs them about SEL concepts and helps them to improve upon their competencies. Finally, taking the time to support teacher candidates by assisting them to develop strong SECs and to be well equipped to deliver SEL programs and apply SEL strategies will foster students' academic success and social-emotional development.

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Chapter 3: Pre-service Teachers' Perspectives on the Attributes of Socially and Emotionally Competent Teachers.

Schools across Canada promote Social Emotional Learning (SEL) curricula as a way to facilitate the development of social-emotional competencies (SECs) in students. Students' emotional and social competencies are fundamental to learning and moderating students' cognitive processes such as perception, attention, memory, and motivation (Garner, 2010; Storbeck & Clore, 2007). Students' emotional and social competencies are also predictors of proper social functioning and better psychological well-being (Maldonado-Carreño &Votruba-Drzal, 2011). When explicitly teaching students social and emotional competencies through SEL programs, students improved not only their academic performance but also increased their prosocial behaviours, adjusted better to school, perceived a decreased in their internalizing problems, and noticed a boost in their physical health (Durlak et al., 2011; Zins, 2004). There is considerable evidence indicating that developing students' social-emotional skills depends significantly on the teachers' SECs (Jennings & Greenberg, 2009; Weissberg, Goren, Domitrovich, & Dusenbury, 2013).

Teachers' SECs are defined as the ability of teachers to apply SEL concepts into daily practice and incorporate those concepts into the educational curriculum. However, when trying to understand what teachers' SECs involve, the Collaborative for Academic, Social, and Emotional Learning (Core SEL Competencies, 2015), an organization in the United States, provides a narrow concept of teachers' SECs. This concept involves an interrelated set of five competencies that are expected to be developed in children: self- awareness, social awareness, responsible decision making, self-management, and relationship management (Zins, 2004). Two out of the five core competencies are centered in one's self and describe the ability to identify

and regulate one's own emotions (Hagen, 2013). Meanwhile, two other competencies are focused on the social dimension and describe the ability to recognize and understand others' emotions as well as the ability to establish and maintain healthy relationships (Hagen, 2013). The fifth competency emphasizes the ability to make responsible decisions about personal behaviour and social interactions (Hagen, 2013). One of the limitations of this conceptualization is that teachers' SECs are often described in terms of students' competencies, and although competencies between these two target population groups are related, the overlapping concepts may create confusion surrounding each group's attributes. Given that teachers' SECs play an important role in students' SEL outcomes, research in this field must continue exploring the concept of social-emotional competent teachers and how these teachers' competencies could look in practice.

3.1. Theoretical Framework

In this study, the comprehensive framework proposed by CASEL was used as a reference to understand the role of teachers in the SEL process and analyze the social-emotional competencies promoted in schools by teachers. The CASEL framework promotes schoolwide SEL implementation and proposes teachers' SECs as one of the most important components to make the SEL process effective (Jennings & Greenberg, 2009; Schonert-Reichl, 2017). Teachers' SECs influence everything from students' emotions, academic performance, and social behaviour to their own well-being (Jones, Bouffard, & Weissbourd, 2013). According to Vesely, Saklofske, and Nordstokke (2014), teachers who recognize, understand, label, express, and regulate their emotions develop resilience, improve their psychological well-being, and positively influence students' behaviours and classroom outcomes (Vesely et al., 2014). Teachers who practice self-awareness and self-regulation are also able to cope effectively with the

complexities of the profession and stress caused by it (Cefai & Cavioni, 2013). Additionally, when teachers acknowledge others' and their own emotions and are aware of how these influence their behaviour, they became more accountable when making decisions about students' learning, instructional practices, and classroom management (Sheppard & Levy, 2019). Furthermore, when teachers demonstrated social and emotional competencies in the classroom and practiced these competencies through daily interaction with their students, students developed better ways to interact with their peers and adults, the classroom climate improved, and the levels of bullying decreased (Bouchard & Smith, 2017; Zhang & Nurmi, 2012).

There is substantial evidence suggesting that SEL outcomes depend on the teachers' SECs because teachers promote and model social-emotional competencies in day-to-day interactions (Jennings & Greenberg, 2009; Jones & Bouffard, 2012; Oberle, Domitrovich, Meyers, & Weissberg, 2016). According to social learning theory, students are more likely to learn social and emotional skills when teachers model these skills (Bandura & Walters, 1977; Becker, Goetz, Morger, & Ranellucci, 2014; Weissberg, Goren, Domitrovich, & Dusenbury, 2013). On the contrary, when teachers cannot appropriately model social and emotional behaviours targeted in the SEL programs, they are likely less effective in transferring these competencies to their students (Reyes, Brackett, Rivers, Elberstone, & Salovey, 2012). A study that surveyed nearly 200 experienced teachers demonstrated that one of the greatest challenges of educators when implementing a particular SEL program for adolescents was to participate in the role-play activities, which indicate that teachers need support for developing their own SECs to integrate the SEL concepts into their everyday teaching (Crooks, Chiodo, Zwarych, Hughes, & Wolfe, 2013). Therefore, modelling social-emotional competencies requires teachers themselves to be socially and emotionally competent (Weissberg et al., 2013).

In an attempt to describe teachers' SECs, Jennings and Greenberg (2009) used the CASEL framework as a point of reference for portraying what it means to be a socially and emotionally competent teacher. In their article "The Prosocial Classroom," Jennings and Greenberg (2009) stated that socially and emotionally competent teachers have a deep understanding of others' and their own emotions and are able to self-regulate effectively to motivate student's learning and deal effectively with the many stressors inherent in the profession. Socially and emotionally competent teachers also develop supportive relationships with their students and promote cooperation among them (Jennings & Greenberg, 2009). Teachers who are socially and emotionally competent establish respectful communication with colleagues and caring relationships within the school community (Jennings & Greenberg, 2009). Teachers who are socially competent effectively collaborate with others (colleagues, students, parents) and manage conflict situations by making conscious decisions and taking responsibility for their actions (Maldonado-Carreño & Votruba-Drzal, 2011). Additionally, they use diverse teaching strategies to build a safe classroom environment, design lessons that build on student strengths and abilities, and help students to be successful academically (Jennings & Greenberg, 2009). Teachers with higher SECs are also more likely to promote a positive change within the school system regarding the promotion of SEL (Murray-Harvey & Slee, 2007). Furthermore, teachers with higher SECs promote a collaborative learning environment, have a higher degree of confidence in the implementation of SEL programs, and consequently, these teachers are able to better model SECs to their students. (Bridgeland, Bruce, & Hariharan, 2013).

When trying to understand what it means to be a socially and emotionally competent teacher, it is crucial to have a clear idea of the social and emotional attributes that teachers are expected to demonstrate in the classroom and determine the key competencies that must be

strengthened to improve SEL implementation quality. Nevertheless, only a few research studies have focused on examining teachers' social and emotional competencies (Jennings & Greenberg, 2009). Usually, the conceptualization of teachers' SECs seems ambiguous and is often based on the competencies that students are expected to develop rather than focusing on teachers' context (Aspelin, 2019). As a consequence, teachers have problems integrating SEL concepts, implementing SEL programs, and demonstrating their SECs in a different context (Greenberg, Domitrovich, Weissberg, & Durlak, 2017; Onchwari, 2010). Hence, the effectiveness of SEL programs could be limited, and students may not receive the intended program benefits.

One of the keys to developing a structured conceptualization of the attributes of socially and emotionally competent teachers is to examine teachers' SECs from the perspective of teacher candidates. Teacher candidates can provide insight into their knowledge about the CASEL framework and the value they place on the different social-emotional competencies before entering the profession. Therefore, the purpose of the present study was to explore the perspectives of teacher candidates about teachers' SECs and identify the competencies that they most value in the classroom by using a concept mapping methodology. The results of this study could help us to develop a structured conceptualization of teachers' SECs, and thus extend the understanding of what it means to be a socially and emotionally competent teacher. The results of this study could also help to identify possible gaps in what teacher candidates perceive as the most important social and emotional attributes to develop in teachers and themselves.

3.2. Group Concept Mapping

Concept mapping is a statistical method that provides a structured conceptualization of people's ideas (depicted as a visual map of clusters) and displays how these ideas are interrelated and organized in groups (Trochim, 1989). In this method, participants are involved in three tasks

where they: 1) brainstorm their ideas in response to a focus statement, 2) group their ideas into categories, and 3) rate each idea in terms of its importance. This method has proven to be useful due to its flexibility as it makes possible to modify the different tasks of the process (brainstorming, sorting, and rating) according to the needs of the study and have a different number of participants (groups as large as 75-80 people or small as 10 and 20 people) (Anderson, Day, & Vandenberg, 2011; Aspelin, 2019; Trochim, 1989). This method identifies the strength of the relationships among ideas but does not indicate the influence that one has over another (Wood, Bostrom, Bridges, & Linkov, 2012).

3.3. Methods.

3.3.1. Participants.

First-year teacher candidates from a large university in southern Ontario participated in this study. Participants were enrolled in the course entitled Social and Emotional Learning in the winter semester 2018-2019 of the Teacher Education Program. The actual sample size varied at different phases of the group concept mapping process. In the first phase of the study, 54 teacher candidates (out of the 54 enrolled in the class) participated in the brainstorming activity, where they generated statements in response to a focus prompt. For the second phase of the study, the 54 teacher candidates who participated in the brainstorming activity were invited to participate in the sorting and rating activities. In this phase, teacher candidates had to complete a background questionnaire and sort the generated statements from the brainstorming activity into thematic groups in a way that made sense to them, label each group, and rate the statements based on their importance.

Data were collected both in-person and online through Qualtrics over one month between September and October 2018. Six teacher candidates completed the sorting and rating activities

in-person, and four participants completed the sorting and rating activities online. The busy schedule of teacher candidates likely affected individual participation in the second phase of the study. In total, ten teacher candidates (four male and six female) with a specialization in the Advanced Studies in the Psychology of Achievement, Inclusion, and Mental Health who were between 20 to 29 years of age participated in the second phase of the study. Eight participants were white, one was Asian, and one participant was from another ethnic background. Nine participants had a bachelor's degree, and one participant had a master's degree. Five participants were from the primary-junior program stream, and five participants were from the intermediate-senior program stream.

3.3.2. Ethics approval and consent

Ethics approval for this study was obtained from the Office of Human Research Ethics (Appendix A). The researcher coordinated with the instructors of the Social and Emotional Learning Course to recruit participants and collect data. Instructors assisted by presenting a brief overview of the study, conducting the brainstorming phase in their first class as a warm-up activity, and providing pre-service teachers with the URL address to the online activities at the end of their second class. Consent for the brainstorming phase was not required because it was part of a large group activity undertaken as a regular classroom activity, and the information collected from this activity was not linked to participants' identity. However, an information letter (Appendix B) was provided after the wall activity to each pre-service teacher in the Social and Emotional Learning class to provide more information about the study. Instructors explained to pre-service teachers that their participation in the second part of the study was voluntary, and if they chose not to participate or to leave the study, it would not affect their academic standing.

Prior to participating in the sorting and rating activities either in a face-to-face session or online, pre-service teachers provided written consent.

3.3.3. Idea generation

The Graffiti Wall activity required pre-service teachers to go around the room in small groups (i.e., three students) and write on three different chart papers their ideas about the following focus statement: "w*hat does a teacher who develops social-emotional competencies in children look like/sound like/ feel like?*" The participants initially generated a list of 93 statements. After the list of generated statements was reviewed and edited for clarity and redundancy, the final list resulted in 74 statements, which were then used in the sorting and rating phases of the concept mapping process. Each of these statements was printed onto individual cards and used for the sorting phase for participants electing to do the sorting in person.

3.3.4. Sorting and Rating

Participants were provided with the option of completing the sorting and rating of statements either in a face-to-face session that occurred the week after their second class or online through Qualtrics. For the face-to-face session, teacher candidates completed the sorting/rating activity in their regular classroom while students who were not interested in participating left the room. At the start of the sorting task, the first author distributed packages to participants that included the consent form, an 8-item demographic questionnaire (Appendix C), instructions for the sorting task (Appendix D), a list of the 74 statements, the individual statements printed out onto individual cards, and the rating sheet (Appendix E).

After distributing the packages, the instructions for the sorting and rating activities were provided by the first author and displayed on the board in front of the participants. Before

beginning, participants were also asked to read the sorting instructions provided in their package. The sorting instructions requested participants to sort the 74 statements into groups that make sense to them and then label the groups they just sorted. Participants were asked to create more than one group and not to place a statement in a group twice. Once students were finished with the sorting activity, they completed the rating sheet. Participants were asked to rate each statement on a scale of 1 (not at all important) to 5 (extremely important) based on how important that attribute is in defining socially and emotionally competent teachers. After completing the background questionnaire and the sorting and rating activities, participants returned the materials in an enclosed envelope to the first author. In the face-to-face session, participants took between 20-40 minutes to complete both the sorting and rating tasks. Pre-service teachers, who completed the background questionnaire and the sorting and rating activities online via Qualtrics, took 15-50 minutes to complete the tasks. Data were incorporated into the analysis only if a participant completed both the sorting and rating. Data collection resulted in a total of 10 participants completing the sorting and rating phase. After the sorting and rating activities were completed, the raw data were entered into the web-based Concept Systems Global MAX software.

3.3.5 Data Analysis

Data were analyzed through the Concept System Global MAX software™. Multidimensional scaling (MDS) was used to create a point map in which each point represented the statements that pre-service teachers sorted. The distance among the points indicated the frequency with which these statements were sorted together and the level of similarity or difference among them. Statements that were frequently sorted together were located close to

each other on the map; statements that were not frequently sorted into the same pile were located farther apart.

After the point map was created, the Kruskal's stress value was obtained to verify whether the point map was representative of the data. A good fit is considered when the stress values are between 0.205 and 0.365 (Kane & Trochim, 2007). Additionally, a hierarchical cluster analysis was used to examine distances among the points in the map, group the statements into conceptual relationships, and produced different possible cluster solutions. Eight concept maps ranging from three clusters to ten clusters per map were examined independently and compared to determine which of the concept maps had the best conceptual fit.

The final cluster solution was selected based on the bridging values and the conceptual fit of ideas within clusters (Dare, 2018). The bridging value indicates the frequency that participants sorted statements in a similar way and to determine how clusters are interrelated. Bridging values range from 0.0 to 1.0. A low bridging value indicates that a statement is conceptually more closely linked to other statements within its cluster. A high bridging value indicates that a statement is more related to statements in other nearby clusters. In other words, the final cluster solution had clusters in which statements were closely related and in which related statements were not in separate clusters. After the final cluster solution was selected, the first author labelled the clusters basing her decision on the labels created by participants during the sorting phase. The labels for each cluster were edited for clarity and exhibited a good representation of the statements within each cluster.

3.4. Results

The data point map generated a Kruskal's stress index of 0.2102, which was within the appropriate range, suggesting that the point map (see Figure 3.1) was a good representation of the sorting data.

Figure 3. 1 Point map of 74 statements in response to the question "What does a teacher who develops social-emotional competencies in children look like/sound like/ feel like?"

A four-cluster solution was selected because the clusters were distinct from one another and produced a better understanding of the social and emotional abilities that a teacher is expected to demonstrate in the classroom. All four clusters (Figure 3.2) had low average bridging values ranging from 0.10 to 0.34, which indicates that the statements in each cluster had similar conceptual meanings and were frequently sorted together into the same group.

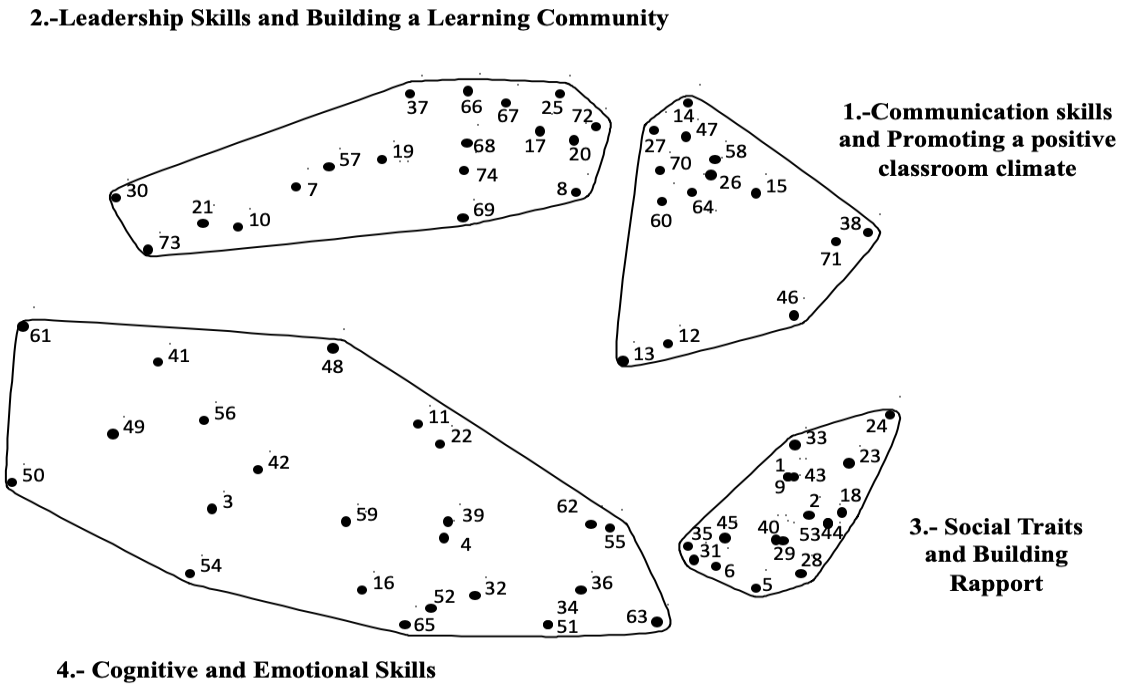

Figure 3. 2. Four cluster map of 74 statements in response to the question "What does a teacher who develops social-emotional competencies in children look like/sound like/ feel like?"

The cluster items, the bridging values for each statement, and the average bridging values for each cluster are displayed in Table 3.1 (Appendix F). Several statements in "Cluster three: Social Traits/Building Rapport" had low bridging values, such as the statement "compassionate," which had a bridging value of 0.00, and the statement "patient," which had a bridging value of 0.01. These statements (with the lower bridging values) seem to reflect the core meaning of the third cluster.

Alternatively, several statements in "Cluster four: Cognitive and Emotional Skills" had high bridging values, such as the statement "diverse/ bring a range of views and instructional

practices into the classroom" which had a bridging value of 1.00, and the statement "seek out professional development" which had a bridging value of 0.82. These high bridging values demonstrate that these statements are not clearly defined and are related to ideas in other nearby clusters. The high bridging values also indicate that participants found these statements difficult to sort, possibly because they did not fit well with any of the other statements, or perhaps participants were unclear on what the statement was implying.

A description of each cluster is provided below. Clusters are listed in order of mean importance rating from most to least important.

3.4.1. Cluster One: Communication Skills and Promoting a Positive Classroom Climate

This cluster included 14 statements and had a low average bridging value of 0.19 (minimum = 0.10, maximum = 0.42, *SD* = 0.10). Overall, statements in this cluster referred to teachers' communication skills (verbal and non-verbal) that convey and promote acceptance, caring, and a sense of belonging in a diverse classroom. Some statements in this cluster referred to teachers' ability to create a positive classroom climate in which all students feel included, accepted, and safe regardless of their differences, such as the statements "provide fair attention to all students," "promote a safe space," and "make students feel that they can be themselves." Other statements referred to teachers' good communication skills and respectful interactions that support a safe environment, such as the statements "provide constructive feedback," "establish good communication with his/her students," "have positive interactions with students and colleagues," and "use positive body language (e.g., facial expressions) when interacting with students."

3.4.2. Cluster Two: Leadership Skills and Building a Learning Community

This cluster included 18 statements and had a low bridging value of 0.23 (minimum = 0.03, maximum = 0.62, *SD* = 0.18). Statements in this cluster generally referred to leadership, professionalism, and building a learning community. Participants perceived this part of the teacher's role in the classroom is to be a leader, which involves having a professional relationship with students and building a sense of community, where students learn skills collaboratively and teachers sustain improvements in their professional practice. Some statements in this cluster referred to teacher leadership and describe the role of teachers in influencing and collaborating with students to improve teaching practice and facilitate students' learning and achievement. For example, "challenge themselves to continue growing and learning" "model the behaviour they want their students to exhibit," "build SEL competencies," and "engage students in learning." Other statements such as "maintain confidentiality" and "act with professionalism" acknowledged teachers' ability to establish a professional relationship with their students. Another theme in this cluster referred to building a classroom community and encouraging positive interactions among students to address students' social-emotional needs, such as the statements "promote dialogue," "create a classroom community," and "promote healthy social relationships."

3.4.3. Cluster Three: Social Traits and Building Rapport

This cluster included 18 statements and had a low average bridging value of 0.10 (minimum = 0.00, maximum = 0.31, *SD* = 0.07), which indicated that statements in this cluster were sorted together frequently by participants. Statements in this cluster referred to teachers' traits that help them to socially connect, interact well, and build strong, healthy relationships

with their students. This cluster had statements that describe a teacher as an “approachable,” “comforting,” “supportive,” “respectful,” and “reliable” person.

3.4.4. Cluster Four: Cognitive and Emotional Skills

This cluster included 24 statements and had a bridging value of 0.34 (minimum = 0.04, maximum = 1.00, *SD* = 0.26). There were two themes that emerged in this cluster. The first theme referred to teachers’ cognitive skills or processes that help them to organize, plan ahead, manage their time, problem-solve, and cope, such as the statements “adaptable,” “organized,” and “have good time-management skills.” The second theme that emerged in this cluster was teachers’ ability to identify their own feelings and thoughts, understand how these influence their behaviours and affect others, as well as their ability to regulate them. Examples of statements in this theme included “aware of the impact of their actions,” “have the ability to regulate their emotions,” and “show confidence in themselves.” Some of the bridging values for statements within this cluster were relatively high suggesting that there were participants who sorted the same statement in different clusters because it had a conceptual link to other clusters. The statements with the highest bridging values were “diverse/ bring a range of views and instructional practices into the classroom” (1), and “seek out professional development” (0.82).

3.4.5 Rating Data

After sorting the statements, participants rated each of the statements based on the importance of the attribute in defining socially and emotionally competent teachers. Table 3.1 (Appendix F) displays the average rating value for each cluster and each statement within each cluster. The average importance ratings for the clusters ranged from a low of 4 to a high of 4.64 (see Figure 3.3).

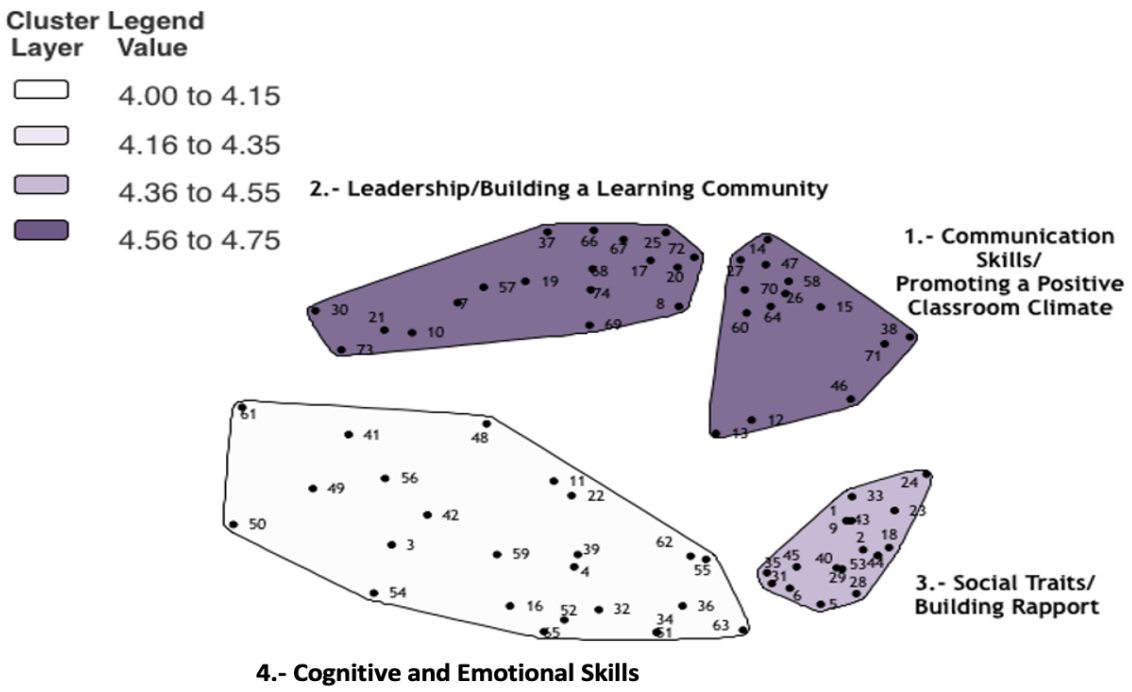

Figure 3. 3. Cluster rating map in response to the following rating prompt "On a 1 to 5 scale, please rate the likeliness of each behaviour or attitude occurring in your school."

When comparing all the clusters statistically, the fourth cluster: "Cognitive and Emotional Skills" was considered significantly less important than the other three clusters. Participants perceived different relevance between the first three clusters ("Social Traits/Building Rapport," "Leadership Skills/Building a Learning Community," and "Communication skills / Promoting a Positive Classroom Climate") and the fourth one, and t-tests revealed that this difference was significant in terms of t-values, degrees of freedom, and levels of significance of (-3.14, 40, $p<0.005$), (-4.54, 40, $p<0.001$), (-5.00, 36, $p<0.001$), respectively. Conversely, there were no statistically significant differences in the way participants rated the clusters one, two, and three, suggesting that these three clusters held a high degree of importance.

Cluster 1 “Communication skills / Promoting a Positive Classroom Climate,” cluster 2 “Leadership Skills/Building a Learning Community,” and cluster 3 “Social Traits/Building Rapport” had the highest average ratings (4.64, 4.57, and 4.44 respectively) out of the four clusters. Additionally, the two statements with the highest ratings in the data set were found within these clusters, including “establish good communication with his/her students” and “model the behaviour they want their students to exhibit” (both with an average rating value = 5). Therefore, these attributes were considered the most important in defining socially and emotionally competent teachers. Other high rated statements in the data set included statements related to teachers’ attributes that help to transmit messages of caring and develop a meaningful connection with students such as approachable (2), check-in with students (15), care for students (46), and invest in their students (74). Cluster 4 ‘Cognitive and Emotional Skills’ had the lowest average rating (4) out of the four clusters. The three lowest-rated statements in the entire data set were also found in the fourth cluster, including “have good time-management skills,” “humble,” and “concise” (average rating value = 3.2). Thus, these attributes were considered less important in defining socially and emotionally competent teachers. Other low-rated statements in the data set included statements related to teachers’ cognitive functions such as skillful (32), curious (39), have a sense of humor (42), and organized (55). Generally, participants perceived the most important attributes in describing socially and emotionally competent teachers to be those that focused on teachers’ ability to transmit messages of acceptance, caring and a sense of belonging, as well as clusters that focus on teachers’ ability to be seen as a role model, build a sense of community among students, and develop a meaningful connection with students.

3.5. Discussion

The purpose of this study was to explore the perspectives of teacher candidates regarding the attributes of socially and emotionally competent teachers. In the first phase of the study, 54 teacher candidates provided statements describing socially and emotionally teachers, and in the second phase of the study, 10 out of the 54 teacher candidates participated in the sorting and rating activities. A four-cluster solution was representative of teacher candidates' perceptions and a good fit for the data. The clusters that emerged in the concept mapping analysis included: communication skills, promoting a positive classroom climate, leadership skills, building a learning community, social traits, building rapport, cognitive skills, and emotional skills.

As noted previously, participants provided a broader view of attributes related to teachers' SECs. Even though the attributes that participants identified are somewhat different, most of the skills reported fit within the framework provided by CASEL. In some cases, participants referred to the same competencies identified by CASEL (2015), but they used different terms. However, participants placed more value on different attributes and emphasized other dimensions of social and emotional competencies. Similarly, other SEL frameworks, including the National Research Council and the Chicago Consortium, also name and organize SECs in a different way (Hagen, 2013; Jones, Barnes, Bailey, & Doolittle, 2017). For example, cognitive skills such as critical thinking and problem-solving are promoted by the National Research Council as part of the "21st Century Competencies" while the term "Non-Cognitive Factors" is used by the Chicago Consortium to describe social and emotional attributes such as mindset and perseverance (Hagen, 2013; Osher et al., 2016). However, different SEL frameworks also agree on some attributes that socially and emotionally competent teachers

should possess to transmit positive emotions to their students, such as teachers' self-awareness and self-regulation of emotions (Frenzel, Goetz, Stephens, & Jacob, 2009).

Based on the four-cluster rating map, behaviours that communicate trust, respect, and inclusion, promote a positive classroom climate, create a sense of community, and establish healthy relationships were considered the most important in describing socially and emotionally competent teachers. In the literature, these behaviours are strongly related. Creating a positive classroom climate and students' sense of community rely on teachers' social skills and abilities such as using inclusive language, demonstrating leadership in the classroom, and establishing healthy relationships with students and colleagues (Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013). In this regard, in 2009, the Ministry of Education launched the Ontario's Equity and Inclusive Education Strategy, which encouraged teachers to effectively use their abilities to model positive behaviours and inclusive language in the classroom to develop a positive environment and thus create a sense of community and achieve collective well-being (Jagers, Rivas-Drake, & Borowski, 2018). This initiative is consistent with the redefinition of the core competencies that CASEL proposed in 2018. Themes such as creating an inclusive classroom, respecting diversity, and pursuing educational equity are currently included as important components of the CASEL framework because they are crucial elements of a positive classroom climate (Jagers et al., 2018). As such, the development of teachers' social and emotional competencies will lead to building a positive classroom climate and creating a sense of community (Cohen, McCabe, Michelli, & Pickeral, 2013).

Table 3.1 displays that specific abilities such as "establish a good communication" and "model the behaviour they want their students to exhibit" were the most valued among teacher candidates. Participants perceived that teacher's communication with their students and their

ability to model SEL behaviours are the most important skills that teachers should have when facilitating SEL and developing students' SECs. Teachers' ability to effectively communicate (verbal and non-verbal) with their students becomes a necessary condition for successful teacher-student relationships (Mart, 2013). Meanwhile, modelling SECs emphasizes the importance of teachers being socially and emotionally competent. Teachers' ability to effectively and consistently model SECs to students in their social interactions teach students how to behave in social situations and help them to develop social and emotional skills (Berman, 2018; Durlak et al., 2011; Jones & Bouffard, 2012; Oberle & Schonert-Reichl, 2017). Consistent with these results and according to Berman (2018), SEL is best achieved when teachers can connect with students and model the attributes, behaviours, and language they are expecting students to use in their daily interactions.

On the other hand, in Table 3.1, it was also observed that participants rated attributes such as "have good time-management skills," "humble," and "concise" as the least important when describing socially and emotionally competent teachers. One possible reason why these attributes obtained the lowest ratings is that they might be perceived as moral attributes or as part of personal aspirations/ideals. Teachers feel motivated to pursue attributes such as humility only when those attributes fit with their moral beliefs or ideals and believe these attributes are going to help them to improve their professional practice (Ruyter & Kole, 2010). Teacher candidates might also have use impression management because they could be aware of the expectations of the profession and wanted to demonstrate they are familiar with the CASEL framework (attributes of more and less influential in trying to achieve SEL outcomes). The CASEL framework usually emphasizes skills related to establishing healthy relationships, identifying emotions, stress management, goal-setting, empathy, and solving problems, and leaves other

dimensions of social and emotional skills that are more explicit in other frameworks (Hagen, 2013).

The group concept mapping created in this study depicted not only the attributes related to the CASEL framework such as “establish a good communication,” “promote healthy social relationships,” and “have the ability to regulate their emotions,” but also draws attention to themes such as “leadership,” “resilience,” “professional development,” and moral attributes such as “humble.” The results suggest include these attributes in the CASEL framework for either having a better understanding of the variety of attributes that socially and emotionally competent teachers are expected to model in the classroom or for providing a more comprehensive model of the teachers’ social-emotional competencies that should be promoted by the SEL training programs or teacher education programs.

3.5.1. Limitations

The results of this study reflect the perspectives of a small group of teacher candidates from one university. Furthermore, teacher candidates were drawn from a cohort that specializes in the Advanced Studies in the Psychology of Achievement, Inclusion, and Mental Health because they were accessible to the first author and served the purpose of the study as they were introduced to the SEL framework and participated in a brainstorming activity in their first class. Although 54 teacher candidates participated in the brainstorming activity and provided a variety of ideas, only 10 teacher candidates participated in the sorting and rating activities. Therefore, the results of this study may not be a reliable representation of the data generated by participants during the sorting and rating tasks. Caution should be taken when generalizing the results of these data to other contexts. Future research could benefit from increasing the number of teacher candidates who participate in both the sorting and rating tasks.

3.6. Implications and Conclusions

One of the purposes of this study was to develop a structured conceptualization of teachers' SECs by exploring teacher candidates' perspectives of what it means to be a socially and emotionally competent teacher. Identifying the abilities that teachers are expected to demonstrate in the classroom could facilitate the development of teachers' and pre-service teachers' SECs. In this study, participants identified attributes such as teachers' ability to build a learning community, create a learning community, and enhance their professional practice as descriptors of socially and emotionally competent teachers. Participants also believed that social traits, communication skills, leadership skills, and cognitive and emotional skills are attributes that teachers with high levels of social and emotional competencies should demonstrate in the classroom. These results demonstrate that teacher candidates perceive a broader range of social and emotional attributes such as "check-in with students," "create a classroom community," "be reliable," and "have resilience."

This study also provided some insight into the social and emotional attributes that teacher candidates perceive as the most important for teachers to demonstrate in the classroom and the idea of prioritizing the acquisition of some social and emotional attributes in teachers. Participants in this study offered different values to some attributes, and the order of importance that participants ranked the attributes coincides with what prior research has observed about how the attributes are related and influence one to another. For example, "building a positive classroom climate" was ranked as the most important cluster, and "establishing a learning community" was ranked as the second one most important cluster. Research indicates that a positive classroom climate and students' sense of community are related in the sense that building a positive classroom climate leads to improve a students' sense of community (Meristo

& Eisenschmidt, 2014). Furthermore, a positive classroom climate promotes the foundation for students' social skills (Stafford-Brizard, 2015). Therefore, although CASEL framework provides the same level of importance to the social and emotional competencies in its model, there are other frameworks that promote a developmental perspective in which some skills serve as foundations for other ones (Hagen, 2013). It would be beneficial in future studies to determine if there is a predictive relationship among clusters/attributes and, if so, identify the attributes that should be mastered first before moving to the next set.

Participants' responses also suggested that socially and emotionally competent teachers should focus more on building a classroom climate where students feel accepted, supported, and safe as well as developing students' sense of community, where collaboration and healthy relationships are promoted. Research has demonstrated that classroom climate contributes to students' social-emotional development and is directly associated with teachers' social-emotional abilities (the more a teacher is socially and emotionally competent, the more capable they are of building a more positive classroom climate and enhancing students' sense of community) (Collie, Shapka, & Perry, 2012; Starkey, Aber, & Crossman, 2019).

In this sense, teacher candidates indicated that teachers' attributes such as "establish good communication with students," "check-in with students," and "care for students" could be critical when building a positive classroom climate. Additionally, teachers' attributes such as "model the behaviour they want their students to exhibit," "invest in their students," and "build SEL competencies" are key when trying to foster students' sense of community. In this way, students who feel safe and supported by their teachers are in a better predisposition to learn (Thapa et al., 2013). These findings are consistent with a study by Meristo and Eisenschmidt (2014), in which the authors suggest that teachers who want to improve the classroom climate

and students' sense of community should exhibit leadership, demonstrate concern for students, dedicate individual time to each one, and promote positive interactions in the classroom. Future research should also focus on providing pre-service and in-service teachers with strategies for building a positive classroom climate and students' sense of community. The educational system should also consider the implementation of policies that support the development of teacher candidates' and in-service teachers' SEC as well as fostering practices in which attributes such as leadership, communication skills, and positive interactions should be emphasized. Efforts to build the capacity of teachers would be more effective when the educational system establishes policies for teachers' professional development that are aligned with evidence-based practices (Kendziora & Yoder, 2016).

As mentioned previously, teacher candidates' perspectives about the social-emotional attributes that teachers should demonstrate in the classroom are important because they are the ones who implement the SEL programs and foster students' social-emotional development (Elbertson, Brackett, & Weissberg, 2009). From the perspective of teacher candidates, attributes such as "establish good communication with his/her students" and "model the behaviour they want their students to exhibit" are the most valuable. Research in SEL has consistently found that effective SEL implementation and the development of students' social-emotional skills depend on the teacher's ability to model SECs and communicate SEL lessons (Bandura & Walters, 1977; Becker et al., 2014; Jennings & Greenberg, 2009; Jones & Bouffard, 2012). Thus, to effectively develop SECs in students, teachers need to receive proper SEL training to develop their SECs. On the other hand, if a teacher does not know how to model appropriately the social and emotional competencies targeted in the SEL programs, the teacher will likely be less effective in imparting these competencies to their students (Reyes et al., 2012).

This paper also concludes that teachers' SECs should continuously be the subject of research to keep improving the social-emotional learning model and obtain a better understanding, development, and application of teachers' SECs (Selvi, 2010). The perspectives of pre-service teachers about teachers' SECs could help to understand pre-service teachers' preconceptions regarding the social and emotional abilities that they are expected to demonstrate in the classroom when starting their careers. Providing pre-service teachers with the opportunity of reflecting on and discussing teachers' social-emotional competencies could help to develop a common language and a shared understanding of the SEL competencies, and as a result, improve SEL training programs and teacher education programs. Teachers who are responsible for the development of students' SECs need to be well equipped to fulfill this responsibility. The education system needs to provide pre-service and in-service teachers with proper SEL training to develop their SECs. Additionally, SEL training should provide teachers with opportunities to practice their newly developed SECs before entering the classroom.

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Chapter 4: Predisposing Social-Emotional Factors and the Role of SECs in Psychological Well-Being

According to the Collaborative on Academic, Social and Emotional Learning (CASEL), social and emotional learning (SEL) is the process by which students develop social and emotional skills to recognize and regulate emotions, understand others' emotions and needs, establish positive relationships, make responsible decisions, and manage challenging situations effectively (Jennings & Greenberg, 2009). In the SEL process, the critical role of teachers in implementing SEL programs has begun to be recognized, but most teachers feel that they do not receive enough support for the development of their SECs (Jones et al., 2013). The empirical evidence suggests that effective implementation of SEL programs and their consequent outcomes depend on the teacher's SECs; however, teachers who demonstrate a high level of SEC in one context may need training or experience in a different setting (Jennings & Greenberg, 2009).

Teachers who are trained to implement SEL programs have been proven to improve their social-emotional competencies, and as a consequence, they feel more confident in their abilities to implement SEL programs and model SEL behaviours for their students (Bridgeland, Bruce, & Hariharan, 2013; Murray-Harvey & Slee, 2007). It also has been argued that teachers who received SEL training demonstrated greater psychological well-being, low levels of burnout, and less likelihood of leaving the job (Jennings & Greenberg, 2009). In a study by Kutcher and his colleagues (2015), teachers who received training on delivering the mental health literacy curriculum to their secondary students significantly experienced improvements in their own mental health literacy. Improving teachers' psychological well-being is one of the goals of in-service teachers’ education as teachers feel more stressed and unhappy because they frequently face challenges at work (e.g., the implementation of new reforms and job demands) (Jones,

Bouffard, & Weissbourd, 2013). One study demonstrated that teachers who have higher levels of emotional competencies are better able to manage job stress and experience higher performance and job satisfaction (Vesely, Saklofske, & Nordstokke, 2014). Teachers who have high levels of SECs cope more effectively with difficult situations they encounter in their jobs because they are more likely to recognize and regulate unpleasant emotions such as frustration and stress (Jennings & Greenberg, 2009). Therefore, teachers need to have high levels of emotional and social competencies to increase and sustain well-being. Teachers with high levels of emotional and social competencies are able to meet job demands placed upon them without affecting their mental health (Jennings & Greenberg, 2009; Zembylas & Schutz, 2009).

The range of SECs that teachers exhibit in the classroom varies depending on contextual and predisposing factors, which may limit teachers' efficacy in providing social-emotional learning (SEL) instruction. Therefore, it is crucial to identify teachers' predisposing factors that establish a strong foundation to facilitate the development of teachers' SECs (Vaida & Opre, 2014). However, in terms of the relationship between predisposing factors and social and emotional competencies, the literature is not yet clear about what attributes might predict social-emotional competencies. Vaide & Opra (2014) suggested that there are predisposing factors (e.g., emotional intelligence) that may influence the development of social-emotional competencies (e.g., people with high EI are more likely to develop emotional competences).

Attributes such as self-efficacy, empathy, and resilience are considered predisposing factors that may contribute to the development of teachers' SECs as these attributes are often included in descriptions of socially and emotionally competent teachers or perceived as essential attributes to develop in SEL training programs. For example, an evidence-based training program called Incredible Years Teacher (IYT) aims to increases the levels of teachers' self-efficacy in the

classroom regarding behaviour management to support teachers' practices that promote children's social, emotional, and academic competence (Fergusson, Horwood, & Stanley, 2013). The IYT program has also been demonstrated to be effective in achieving long-term effects, such as reducing teachers' burnout (Wetherall, 2014). Another SEL program called Stress Management and Resilience Training (SMART) teaches empathy and compassion (among other attributes) and has been demonstrated to improve quality of life, stress, and anxiety among teachers (Meiklejohn et al., 2012; Sood, Prasad, Schroeder, & Varkey, 2011). On the other hand, the Cultivating Awareness and Resilience in Education (CARE) training program has the objective of improving emotional regulation and resilience (Roeser et al., 2013), and consequently reduces stress, anxiety, and depression symptoms and promotes improvements in teachers' well-being and self-efficacy (Jennings at al., 2011). As previously mentioned, empathy, self-efficacy, and resilience have been considered essential aspects of emotional and social competencies that can be nurtured by SEL programs.

The first attribute, empathy, refers to the ability to identify and understand others' emotions, thoughts, and perspectives (Shanmugasundaram & Mohamad, 2011). Empathy has various components, including the ability to perceive and adopt others' perspectives, to react and exhibit different emotions towards other's emotions, and to imagine oneself in other people's places (Swan & Riley, 2012). Empathic teachers get to know their students, are aware of students' needs, and comprehend their feelings (Stojiljković, Todorović, Đigić, & Dosković, 2014). Empathic teachers also show concern for their students, listen to their ideas, and consider their students' perspectives (Hen & Goroshit, 2016). Additionally, teachers who demonstrate empathy motivate their students to practice empathy with others and develop strong relationships with them (Jennings & Greenberg, 2009; Hen & Goroshit, 2016). Empathic teachers create a

strong bond with their students, which allows teachers to experience positive emotions that result from positive interactions with their students and increases their job satisfaction (Peck, Maude, & Brotherson, 2015). However, when there are no clear boundaries in the interactions with students, teachers can be affected by students' negative emotions, and this may lead teachers to emotional exhaustion (Daly & Suggs, 2010; Peck, Maude, & Brotherson, 2015). Previous studies have also demonstrated that teachers who demonstrate empathy perceive benefits in the classroom including improvements in students' academic achievement and increase in students' sense of belonging and well-being (Brackett, Palomera, Mojsa Kaja, Reyes, & Salovey, 2010; Palomera, Briones, Gómez-Linares, & Vera, 2017).

The second attribute, self-efficacy, refers to the beliefs that people hold about themselves regarding their ability to either regulate their emotions (emotional self-efficacy) or to conduct teaching (teaching self-efficacy) (Hen & Goroshit, 2016). Teachers who have a strong sense of teaching self-efficacy focus on their educational goals and trust in their abilities to achieve them (Skaalvik & Skaalvik, 2010). Teachers who have a strong sense of teaching self-efficacy design their classes in a way that motivates their students and lets them take an active role in their learning (Zee & Koomen, 2016). Teachers who have a strong sense of teaching self-efficacy also believe they can deal with challenging situations that occur in the classroom and feel more comfortable teaching a diversity of students (Zee & Koomen, 2016; Hen & Goroshit, 2016). Some benefits associated with having a high sense of self-efficacy include an increase in psychological well-being and a decreased likelihood of burnout (Skaalvik & Skaalvik, 2010). Having a high sense of self-efficacy is also related to an increase in job satisfaction and a decrease in teachers' levels of stress (Palomera, Briones, Gómez-Linares, & Vera, 2017).

Additionally, teachers who have a high sense of self-efficacy provide a better quality of implementation of SEL programs and promote positive changes in students' behaviours (Gorozidis & Papaioannou, 2011). There also seems to be a relationship between teachers' self-efficacy and empathy where teachers who put themselves in their students' shoes are the ones who are more involved in their learning and feel more capable of adopting new practices for the benefit of their students (Hen & Goroshit, 2016). Self-efficacy also plays an important role in teacher's resilience. When teachers believe they can deal with the problems that they experience at work, they concentrate more on creating possible solutions and are more willing to adapt to uncertainty and change (Leroux & Théorêt, 2014).

The third attribute, resilience, is defined in this study as a complex and dynamic construct that refers to the interaction between individuals' social environments and their intrapersonal skills that help them to cope and adjust to stressful situations (Beltman et al., 2011; Gloria et al., 2013; Mansfield et al., 2012). In the classroom, teacher resilience refers to the ability to find different ways to solve a problem, identifying available resources, and in case of failure, having the mindset to embrace failure and take it as an opportunity for growth (Zeidner, Matthews, & Roberts, 2012). Resilient teachers adapt to challenging situations in the classroom and use different instructional practices relevant to their students' needs (Mansfield, Beltman, Price, & McConney, 2012). Resilient teachers also value professional development and keep learning and improving their practices as a way to prepare for and address potential challenging situations (Leroux & Théorêt, 2014). Resilience also refers to teachers' ability to establish social supports and mobilize resources as a way to deal with challenging situations (Ntontis, Drury, Amlôt, Rubin, & Williams, 2018). A comprehensive framework for building resilience in teacher education (i.e., the BRITE framework) promotes pre-service teachers' skills, including self-

efficacy, sense of purpose, communication skills, social competence, emotional regulation skills, optimism, empathy, problem-solving skills, and consequently, improves their well-being (Mansfield, Beltman, Broadley, & Weatherby-Fell, 2016). When looking at the constructs of resilience and socio-emotional competencies, they share some common characteristics, but it is still unclear whether these two constructs have a causal relationship or work under the same mechanism (Poulou, 2007). As for personal benefits, teachers with high levels of resilience have been found to have higher levels of well-being than those who have low levels of resilience (Pretsch, Flunger, & Schmitt, 2012). Resilient teachers perceive stressful situations as an opportunity to grow personally and professionally, and consequently, their levels of stress decrease while their psychological well-being increases (Richards, Levesque-Bristol, Templin, & Graber, 2016; Vinayak & Judge, 2018).

This study examined the relationship between predisposing factors such as resilience, self-efficacy, and empathy, social-emotional competencies, and psychological well-being. This study focused on pre-service teachers' competencies because supporting the social and emotional development of pre-service teachers contributes to the improvement of their practices once they enter the profession, and pre-service education can serve as a basis for teacher professional development (Jennings & Greenberg, 2009). The results of this study could promote policies and practices to support the development of SECs in pre-service, assist in improving pre-service teacher education and SEL training programs that develop SECs in teachers, and consequently increase the success of SEL programs in schools.

The purpose of this quantitative, exploratory study was to evaluate the relationships among pre-service teachers' predisposing social-emotional factors (i.e., resilience, self-efficacy, empathy) and their SECs in the classroom. As a second objective, this study examined the effect

of pre-service teachers' SECs on their levels of well-being over and above predisposing social-emotional factors. Effectively evaluating which pre-service teachers' predisposing social-emotional factors are directly associated with their SECs in the classroom could assist in improving pre-service teacher education and SEL training programs that develop SECs in teachers. Furthermore, recognizing the influence of pre-service teachers' SECs on their levels of well-being could help in promoting policies and practices to support the development of SECs in pre-service and in-service teachers.

4.1. Research Questions

The following research questions were examined during this study:

Research question 1. Do predisposing social-emotional factors (i.e., resilience, self-efficacy, empathy) predict SECs in the classroom among pre-service teachers?

Research question 2. Do SECs in the classroom among pre-service teachers predict levels of well-being over and above predisposing social-emotional factors?

4.2. Methods

A quantitative approach, which was descriptive and non-experimental, was used for this study to evaluate the relationship among the variables and therefore, make predictions about the variables under study. Particularly, this study examined the extent to which predisposing social-emotional factors could predict SECs in the classroom among pre-service teachers. Another goal of this study was to examine whether or not SECs in the classroom could predict levels of psychological well-being over and above predisposing social-emotional factors. Pre-service teachers completed online surveys at two points in time during the fall semester (i.e., first, in

November before the practicum and, second, during the last week of the practicum, when pre-service teachers have had the opportunity to use their SECs in classrooms and are more aware of their attributes).

4.2.1. Recruitment procedure

The researcher contacted the Associate Dean and Coordinator of the Teacher Education Program at Western University in London, Ontario, prior to starting the study to obtain assistance in recruiting pre-service teachers to participate in the study. The Coordinator sent out an email invitation (Appendix G) to all first-year B.Ed. Students inviting them to participate. The researcher also coordinated with the professor of the course entitled *Teaching, Learning & Development* of the Teacher Education Program to attend a lecture to present a brief overview of the study and invite pre-service teachers to participate in the study. The researcher explained that participation was voluntary, and participants could withdraw from the study at any time. During this introduction, the URL address to the online Qualtrics survey package was also provided.

Participating pre-service teachers completed online measures at two points during the fall semester. The first data collection period was in November before pre-service teachers' practicum. Pre-service teachers received an email from the pre-service office containing the URL address to the online Qualtrics survey package with the first set of measures including a demographic questionnaire (Appendix H) and three different scales: The Teacher Sense of Efficacy Scale (Appendix I), Connor-Davison Resilience Scale, and Interpersonal Reactivity Index. Pre-service teachers who completed time I measures online were compensated for their time with a gift card of $15.

The second data collection period was during the last week of pre-service teachers' practicum (the second week of October); after pre-service teachers have applied their SECs. At this point, pre-service teachers who completed the first set of surveys at the beginning of the academic year received an email (Appendix J) containing the URL address to the online Qualtrics survey with the second set of measures. The second set of measures included the Emotional Competency Inventory – University Edition (ECI-U) and the World Health Organization Quality of Life-Brief version (WHOQOL-BREF) (Appendix K). Pre-service teachers who completed Time II measures online were compensated for their time with a gift card of $15.

4.2.2. Measures

The measures in this study were carefully selected using the following criteria: a) the measure should have been used in previous research with a similar sample population, b) it should also include the range of dimensions that theoretically make up the construct, c) strong psychometric properties, and d) feasibility (availability of the measure, as well as simplicity of interpretation).

In the first data collection period, pre-service teachers completed four measures, including a short demographic questionnaire, TSES, CD-RISC-10, and the IRI. A brief description of each measure is presented below:

Demographic questionnaire. This 8-item survey is designed to collect information regarding each participant's age, gender, teaching position, program stream, years taught (if any), and relevant professional experiences/education.

Teacher Sense of Efficacy Scale (TSES). This measure captures respondents' perceived level of control or influence over various aspects of the teaching and classroom environment. This measure consists of 24 items, comprising three composite subscales: efficacy for instructional strategies, efficacy for classroom management, and efficacy for student engagement. Sample items include, "How much can you do to control disruptive behaviour in the classroom," as well as "How much can you do to motivate students who show low interest in schoolwork." Items are rated on a 9-point scale with the following anchors: 1- nothing, 3-very little, 5-some influence, 7-quite a bit, and 9-a great deal. The scale has an alpha coefficient of reliability of 0.94 (Tschannen-Moran & Woolfolk Hoy, 2001). In this study, the TSES scale had a Cronbach's alpha of 0.77, which indicates a high level of internal consistency.

Connor-Davison Resilience Scale (CD-RISC-10). This measure is a 10-item self-report scale that measures individuals' perceptions of resilience. The items assess individual's perceptions of their abilities to adapt to change, deal with unexpected events, handle unpleasant feelings, stick to their goals despite obstacles, and cope with stress. Sample items include, "I am able to adapt to change" as well as "I can deal with whatever comes." Each item is rated on a 4-point Likert scale, ranging from 0 (not true at all) to 4 (true nearly all the time). The CD-RISC has been used with various populations, including teachers, nurses, and social workers and showed good psychometric properties (e.g., the scale has an alpha coefficient of reliability of .85) (Campbell-Sills & Stein, 2007). In this study, the CD-RISC-10 scale had a Cronbach's alpha of 0.94, which indicates a high level of internal consistency for this scale.

Interpersonal Reactivity Index (IRI). This measure has 28 items that assess a set of separate but related constructs that represent the four dimensions of empathy. The four dimensions include Perspective Taking (the tendency to spontaneously adopt the psychological

point of view of others), Fantasy (respondents' tendencies to transpose themselves imaginatively into the feelings and actions of fictitious characters in books, movies, and plays), Empathic Concern ("other-oriented" feelings of sympathy and concern for unfortunate others), and Personal Distress (self-oriented feelings of anxiety and discomfort in response to the distress of others). In this study, subscale was utilized to measure the cognitive component of empathy. Sample items include, "I try to look at everybody's side of a disagreement before I make a decision" as well as " When I'm upset at someone, I usually try to put myself in his shoes for a while ." Each item is rated on a 5-point Likert scale ranging from "Does not describe me well" to "Describes me very well." The four subscales had satisfactory internal and test-retest reliabilities (internal reliabilities ranged from .71 to .77; test-retest reliabilities ranged from .62 to .71) (Davis, 1983). In this study, the IRI scale had a Cronbach's alpha of 0.79.

In the second data collection period, pre-service teachers completed two measures, including the Emotional Competency Inventory – University Edition (ECI-U) and the World Health Organization Quality of Life-Brief version (WHOQOL-BREF). A brief description of each measure is presented below:

The Emotional Competency Inventory – University Edition (ECI-U). This measure contains 63 items and is designed to evaluate performed behaviours associated to social and emotional competencies (i.e., self-awareness cluster, self-management, social awareness, and relationship management) of individuals in university settings. The ECI-U (Boyatzis & Goleman, 2002) was selected because it is somewhat aligned with the SEL framework and has been used in other studies with pre-service teachers. In addition, this measure showed strong and consistent validity in predicting levels of well-being (Wolff, 2005). Sample items include, "I maintain cooperative working relationships," as well as "I recognize how my feelings affect my

performance." Terms such as "customers" or “people” were adapted and replaced by the term "students". For example: “I accurately read students’ moods or non-verbal cues” instead of “I accurately read people’s moods or non-verbal cues.” Another example is: “I am attuned to providing support to my students” instead of, “I am attuned to providing support to my customers”. Each item is rated on a 5-point Likert type scale, ranging from 1 (Never) to 5 (Consistently) based on the frequency of use of each behaviour. The ECI-U has an overall reliability of 0.91 and reliability coefficients of 0.59 (self-awareness), 0.69 (self-management), 0.67 (social awareness), and 0.86 (relationship management) (Boyatzis and Goleman, 2002; Seal, Sass, Bailey, & Liao-Troth, 2009). In this study, the ECI-U had a Cronbach’s alpha of 0.92, which indicates a high level of internal consistency for this scale.

The World Health Organization Quality of Life-Brief version (WHOQOL-BREF). This 26 item self-report inventory assesses four major domains: physical, psychological, social relationships, and environment. Sample items include "How satisfied are you with your capacity for work?" as well as "How much do you enjoy life?" Items are rated on a 5 point-Likert type scale, ranging from 1 (Not at all) to 5 (Extremely). Coefficient alpha reliabilities for the full-scale score ($\alpha = .94$) and physical ($\alpha = .87$), psychological ($\alpha = .86$), social ($\alpha = .79$), and environment ($\alpha = .86$) domains scores were acceptable (Skevington, Lotfy, & O'Connell, 2004). In this study, the WHOQOL-BREF scale had a Cronbach’s alpha of 0.91, which indicates a high level of internal consistency for this scale.

4.2.3. Ethics approval and consent

Ethics approval for this study was obtained from the Office of Human Research Ethics. Before completing the set of measures in each data collection period, pre-service teachers

provided implied consent via Qualtrics. The introductory page of the Qualtrics online survey package included a letter of information and consent (Appendix L) requesting pre-service teachers' voluntary participation. Pre-service teachers' voluntary participation in the study was acknowledged by typing their student identification number in a box that appeared below the letter of information and consent. The risks associated with participating in this study were relatively low. A potential risk of participating in this study included invasion of privacy and breach of confidentiality, as the inclusion of participants' demographic information and email address could potentially be used to link the data and identify an individual. The potential benefits of this study included the opportunity for pre-service teachers to reflect on their mental health and the use of their social-emotional competencies in their work with students. Safeguards to protect data included password-protected computers to store collected data. Student ID numbers were removed from the data set at the earliest point possible and replaced with a unique generic ID.

4.2.4. Data analysis

The data were collected through Qualtrics and analyzed in SPSS. Hierarchical regression analyses were conducted to determine 1) the predisposing factors that predict SECs in the classroom among pre-service teachers and 2) predictors of psychological well-being (i.e., SECs or predisposing factors). Hierarchical regression analysis was used to predict the outcomes or consider the value of the contribution of more than one predictor variable (Fink, 2006).

4.2.5. Participants

The link to access the first set of surveys was sent to 391 pre-service teachers in their first year (1st semester) of the Teacher Education Program at Western University in London, Ontario.

The initial email invitation to participate yielded 136 responses in the first collection period. In the second data collection, 108 participants out of the 136 responded to the second set of surveys, of which 97 participants' responses were included in the analyses. Twenty-five percent of pre-service teachers who completed both sets of surveys and had fewer than three omitted items were included in the analysis. The responses collected from 28 pre-service teachers who did not complete the second data collection period were excluded from the data analysis because the objective of the study required participants to participate in both data collection periods. Data from 11 participants, who completed both surveys, were also excluded because their surveys were completed in a significantly short time, and the responses reflect patterns such as straight-lining (all 5's) suggesting that the responses provided were not based on a thoughtful process.

4.3. Results

4.3.1 Descriptive Statistics

Of the 97 respondents, 8 were male and 89 were female. The majority of the participants (83.5%) were under 25 years old, 11 participants (11.5%) were between 25 to 29 years old, 3 participants were in their 30s, 1 participant was in her 40s, and 1 participant did not report her age. The racial demographics of the participants were 78 White, 13 Asians, 1 African Canadian, and 5 participants reported as other. Most respondents had at least a bachelor’s degree (96.9%) and 3 participants had a master’s degree. Descriptive data for age, gender, and ethnicity are presented in Table 4.1.

Table 4. 1 Participant Age, Gender, Ethnicity, and Level of Education

Variable	n	%
Gender		

Female	89	91.8
Male	8	8.2
Age at time of the survey		
Under 25	81	84.4
25-29	11	11.5
30-39	3	3.1
40-49	1	1
Missing	1	
Ethnicity		
Black/African Canadian	1	1
Asian	13	13.4
White	78	80.4
Other	5	5.2
Degree		
Bachelor's degree	94	96.9
Master's degree	7	3.1

Note. N= 97

Program stream (Table 4.2) was another variable about which data were collected. Approximately half (49.5 %) of the respondents were in the Intermediate–Senior program stream,[1] 42.3% were in the Primary-Junior stream,[2] and 8.2% were in the Junior- Intermediate stream.[3]

[1] Prepare to teach grades 4 to 10. You must choose French, Music or Religious Education for Catholic Schools as a teaching option.
[2] Prepare to teach all subjects, Kindergarten to grade 6. Primary-Junior French: Prepare to teach core and immersion French, K-6.
[3] Prepare to teach grades 7 to 12. You must choose two teaching options from a list of teachable subjects.

From the 97 Pre-service teachers who participated in the study 22.7% were enrolled in a path to earn a specialization in Advanced Studies in the Psychology of Achievement, Inclusion, and Mental Health, 17.5% in International Education, 15.5% in French (Elementary), 13.4% in Urban Education, 11.3% in Early Childhood Education, 11.3% in STEM Education, 8.2% in and French (Secondary).

Table 4. 2 Participant Program Stream and Specialty

	n	%
Program Stream		
Primary-Junior	41	42.3
Junior-Intermediate	8	8.2
Intermediate-Senior	48	49.5
Specialty		
International Education	17	17.5
Early Childhood Education	11	11.3
Urban Education	13	13.4
French (Elementary)	15	15.5
French (Secondary)	8	8.2
STEM Education	11	11.3
Advanced Studies in the Psychology of Achievement, Inclusion, & Mental Health	22	22.7

Participants were asked to report their total years of experience in teaching. The majority of the participants (62.9.8%) did not have any teaching experience. Of the 36 participants who have teaching experience, 13 reported having experience as teaching volunteers, 7 as teacher assistants, 6 acquired experience through their undergraduate practicums and placements, 5 have experience as tutors, and 5 as early childhood educators. The average years of teaching experience were 2.11 years. Descriptive information about participants' years of experience is in Table 4.3.

Table 4. 3 Participants' Years of Experience

Years of experience	n	%
0	61	62.9
1	10	10.3
2	10	10.3
3	4	4.1
4	2	2.1
5	2	2.1
More than 5	8	8.2

Note. N=97

4.3.2. Predisposing Social-Emotional Factors that Predict SECs.

The first research question asked, what predisposing social-emotional factors (i.e., resilience, self-efficacy, empathy) predict SECs in the classroom among pre-service teachers? A hierarchical regression analysis was conducted as part of the research methodology to examine the first research question. The examination of assumptions was the first step in the analysis.

4.3.2.1. Testing of Assumptions

Before conducting the statistical analyses to address the first research question, the assumptions of normality, linearity, and homoscedasticity were tested. Additionally, Pearson correlation coefficients were calculated to examine the strength of the relationship between the DV and the IVs. The results indicate a moderate positive correlation between resilience and SECs (p =.410), a weak positive correlation between self-efficacy and SECs (p =.276), and a very weak positive correlation between empathy and SECs (p =.159). These results also indicated that multicollinearity was unlikely to be a problem. All the hierarchical regression assumptions were met except for six outliers.

Table 4. 4 Pearson's Correlations among Predisposing Social-Emotional Factors and SECs

Measure	1	2	3	4
1.-SECs	-			
2.Resilience	.410**	-		
3.-Self-Efficacy	.186	.276**	-	
4.-Empathy	.049	.323**	.159	-

**. Correlation is significant at the 0.01 level (2-tailed).

4.3.2.2. Hierarchical Regression For SECs Predictors

A hierarchical regression analysis[4] was conducted twice, with outliers and without outliers to examine what predisposing social-emotional factors (resilience, self-efficacy, and empathy) predict levels of SECs in the classroom among pre-service teachers. The results from both analyses (with and without outliers) were nearly identical. Both analyses concluded that resilience was the one from the three independent variables that explained most of the variance (18.3% without outliers and 16.8% with outliers) in SECs (see table 4.5). Self-efficacy and empathy explained only a small part of the variance (3.1% without outliers and 1.5% with outliers) in SECs. Most of the variance (78.6 % without outliers and 81.7% with outliers) in the dependent variable was still unexplained, so adding other independent variables could improve the fit of the model.

Table 4. 5 SECs and Predisposing Social-Emotional Factors Model Summary

[4] A hierarchical regression analysis was also run with outliers and it was noted that the outliers did not affect the findings.

	Without Outliers				With Outliers			
Model	R	R2	Adjusted R2	Std. Error of the Estimate	R	R2	Adjusted R2	Std. Error of the Estimate
1 Resilience	.428[a]	0.183	0.174	0.23999	.410[a]	.168	.160	.28070
2 Resilience, Self-efficacy	.431[b]	0.186	0.168	0.24086	.417[b]	.174	.157	.28123
3 Resilience, Self-efficacy, Empathy	.462[c]	0.214	0.187	0.23810	.428[c]	.183	.157	.28120

In Table 4.6, The p-values for the F statistic were < .05 in the third model suggesting this model was statistically significant and at least one of the independent variables was a significant predictor of the dependent variable (SECs), as is indicated by a large *F* value and a small significance level.

Table 4. 6 SECs and Predisposing Social-Emotional Factors ANOVA Summary

		Without Outliers					With Outliers				
Model		SS	df	MS	F	Sig.	SS	df	MS	F	Sig.
1	Regression	1.147	1	1.147	19.914	.000[b]	1.516	1	1.516	19.242	.000[b]
	Residual	5.126	89	0.058			7.485	95	.079		
	Total	6.273	90								
2	Regression	1.168	2	0.584	10.064	.000[c]	1.567	2	.784	9.909	.000[c]
	Residual	5.105	88	0.058			7.434	94	.079		

	Total	6.273	90								
3	Regression	1.341	3	0.447	7.884	.000[d]	1.648	3	.549	6.947	.000[d]
	Residual	4.932	87	0.057			7.354	93	.079		
	Total	6.273	90								

a. Dependent Variable: SECs

b. Predictors: (Constant), Resilience

c. Predictors: (Constant), Resilience, Self-efficacy

d. Predictors: (Constant), Resilience, Self-efficacy, Empathy

When outliers were excluded from the data, the three predictors explained 21.4% of the variance in SECs (R^2 =.214, F (3,87) =7.884, p<.001). In the first model, resilience explained 18.3% of the variance in SECs (R2 Change = .183). In the second model, the introduction of self-efficacy explained an additional 0.3% of the variance in SECs, after controlling for resilience (R^2 Change = .003). In the third model, empathy explained an additional 2.8% of the variance in SECs, after controlling for resilience and self-self-efficacy (R^2 Change = .028). Resilience (β = .499, p < 0.001) continued to be a predictor of SECs. The p-values of self-efficacy and empathy were again above the significance level of .05 (β = -.052, p = .593 and β = .177, p = .084 respectively), which suggest that they were not significant predictors of SECs. In this analysis, the general form of the equation to predict SECs from resilience was SECs = 3.247+ (0.026 *resilience). Unstandardized coefficients indicate how much the dependent variable varies with an independent variable when all other independent variables are held constant. The unstandardized coefficient, B, for resilience is equal to 0.026 (see table 4.7), which suggested that for every unit increase in resilience, SECs scores increase by .026.

When outliers were included in the data, the results of the regression indicated that the three predictors explained 18.3% of the variance (R^2 =.183, F (3,93) = 6.947, p<.001). In the first

model, resilience explained 16.8% of the variance in SECs (R^2 Change = .168). In the second model, the introduction of self-efficacy explained an additional 0.6% of the variance in SECs, after controlling for resilience (R^2 Change = .006). In the third model, empathy explained an additional 0.9% of the variance in SECs, after controlling for resilience and self-self-efficacy (R^2 Change = .009). While resilience contributed significantly to predict SECs in pre-service teachers (β = .419, p<.001) self-efficacy (β = .086, p=.381) and empathy did not (β =-.100, p=.315). In this analysis, the general form of the equation to predict SECs from resilience was SECs = 3.191+ (0.027 *resilience). Unstandardized coefficients indicate how much the dependent variable varies with an independent variable when all other independent variables are held constant. The unstandardized coefficient, B, for resilience is equal to 0.027 (see table 4.7), which suggested that for every unit increase in resilience, SECs scores increase by .027

Both analyses (with and without outliers) concluded that resilience had a statistically significant, positive, and moderate predictive power on SECs.

Table 4. 7 Hierarchical Regression Analysis For SECs

		Without Outliers					With Outliers				
Model		B	Std. Error	Beta	t	P.	B	Std. Error	Beta	t	P.
1	Constant)	3.247	0.174		18.670	0.000	3.191	.188		17.013	.000
	Resilience	0.026	0.006	0.428	4.462	0.000	.027	.006	.410	4.387	.000
2	(Constant)	3.372	0.271		12.422	0.000	3.027	.277		10.930	.000
	Resilience	0.027	0.006	0.439	4.477	0.000	.026	.007	.389	3.987	.000
	Self-efficacy	-0.020	0.034	-0.059	-0.599	0.551	.029	.036	.078	.804	.423
3	(Constant)	3.495	0.277		12.598	0.000	3.108	.288		10.782	.000

Resilience	0.030	0.006	0.499	4.853	0.000	.028	.007	.419	4.108	.000
Self-efficacy	-0.018	0.034	-0.052	-0.536	0.593	.032	.036	.086	.880	.381
Empathy	-0.012	0.007	-0.177	-1.747	0.084	-.008	.008	-.100	-1.009	.315

*4.3.*3. *Predisposing Factors and SECs as Predictors of Psychological Well-being.*

The second research question was: do SECs in the classroom among pre-service teachers predict levels of well-being over and above predisposing social-emotional factors?

A hierarchical regression analysis was conducted to answer the second research question. The examination of related assumptions was the first step in the analysis.

4.3.3.1. Testing of Assumptions

Before conducting the main statistical analyses to address the research question, assumptions for a hierarchical regression analysis were tested. The assumptions of linearity, homoscedasticity, and multicollinearity were met while the assumption of normality was rejected. The results from the testing of these assumptions are presented below.

The Shapiro Wilk test was used to test for normality (see table 4.8). The p-value of the Shapiro-Wilk was lower than 0.05 suggesting that the data was not normally distributed. When looking at the residuals histogram, psychological well-being had a negative skew and a few relatively extremely large values. These large values had a great influence on mean and variance and potentially may also have a great influence on the results of a regression analysis. Log transformation was applied to make data more suitable for analysis. However, due to the extremely large values at both ends of the distribution, the transformation by log was ineffective and this may be a limitation of the model. However, this type of skewed data is a true

representative of our sample. The moderate to high levels of psychological well-being reported by first-year pre-service teachers may indicate that they rarely had negative feelings because they were starting the semester and didn't feel as much pressure as their peers who were one year ahead of them.

Table 4. 8 Test of Normality Before and After Log Transformation

	Kolmogorov-Smirnova			Shapiro-Wilk		
Variable	Statistic	*df*	*p*	Statistic	*df*	*p*
Psychological well-being	.135	97	.000*	0.946	97	0.001
LG-Psychological Well-being	0.167	97	0.000	0.906	97	0.000

Pearson correlation coefficients were calculated to examine the strength of the relationship between the DV and the IVs. The results indicating a weak positive correlation between resilience and psychological well-being (p =.294), a weak positive correlation between self-efficacy and psychological well-being (p =.212), a weak positive correlation between SECs and psychological well-being (p =.251), and a very weak negative relationship between empathy and psychological well-being (p =-0.019). These results also indicated that multicollinearity was unlikely to be a problem.

Table 4. 9 Pearson’s Correlations among Predisposing Social-Emotional Factors, SECs, and Psychological well-being.

	M	(SD)	1	2	3	4	5
Psychological Well-being	15.53	(2.31)	-				
Resilience	29.71	(7.16)	.294**	-			
Self-efficacy	7.16	(0.08)	.212*	.276**	-		
Empathy	20.06	(3.82)	-0.019	.323**	0.159	-	
SECs	4.00	(0.30)	.251*	.410**	0.186	0.049	-

**. Correlation is significant at the 0.01 level.
*. Correlation is significant at the 0.05 level.

4.3.3.2. Simple Linear Regression to Predict Psychological Well-being from SECs

A simple linear regression analysis was performed to examine to what extent SECs in the classroom among pre-service teachers predict levels of well-being. The R^2 value for the simple linear regression model was 0.063, which suggests that SECs explained 6.3% of the variance in well-being. (Table 4.10). It also meant that 93.7 % of the variance was still unexplained, so adding other independent variables could improve the fit of the model.

Table 4. 10 Psychological Well-being and SECs Model Summary

Model	R	R2	Adjusted R2	Std. Error of the Estimate	B	Std. Error	Beta	t	Sig.
1 SECs	.251[a]	0.063	0.053	2.25389	1.897	0.751	0.251	2.525	0.013

a. Dependent Variable: Psychological well-being

The p column suggested that pre-service teachers' levels of SECs (p =0.013) predicted their levels of psychological well-being on an individual basis. More specifically, an individual with low levels of SECs is expected to have low levels of psychological well-being. Conversely, an individual with high levels of SECs is expected to have high levels of psychological well-being. Unstandardized coefficients indicate how much the dependent variable varies with an independent variable when all other independent variables are held constant. The unstandardized coefficient, B, for SECs was equal to 1. 897, which suggested that for every unit increase in SECs, psychological well-being scores increased by 1.897. SECs contributed significantly to predict psychological well-being in pre-service teachers (β = .251, p=.013).

4.3.3.3. Hierarchical Regression For Psychological Well-Being Predictors

A hierarchical regression analysis was performed to examine the influence of pre-service teachers' SECs to predict levels of psychological well-being, after controlling for predisposing social-emotional factors (resilience, self-efficacy, and empathy). In the first model of the hierarchical regression analysis, only the variable resilience was included as this variable theoretically is expected to predict well-being. In the second model, self-efficacy was included (after resilience) in the model. In the third, empathy was included (after resilience and self-efficacy). In the fourth and final model, SECs were included (after resilience, self-efficacy, and empathy). Table 4.11 displays the R^2 and the adjusted R^2 values and explains how much of the variance in well-being can be explained by SECs . In the fourth model, R^2 was .136, which suggests that the independent variables explained 13.6% of the variance in psychological well-being. Resilience explained most of the variance in psychological well-being (8.6%) while self-efficacy and empathy only explained 3.6%. The introduction of SECs explained an additional 1.4 % of the variance in Psychological Well-being, after controlling for the

predisposing social-emotional factors.It also meant that 86.4 % of the variance was still unexplained, so adding other independent variables could improve the fit of the model.

Table 4. 11 Psychological Well-being, SECs, and Predisposing Social-Emotional Factors Model Summary

Model	R	R2	Adjusted R2	Std. Error of the Estimate	R2 Change	F Change	Sig. F Change
1 Resilience	.294[a]	0.086	0.077	2.22566	0.086	8.963	0.004
2 Resilience, Self-efficacy	.324[b]	0.105	0.086	2.21447	0.019	1.962	0.165
3 Resilience, Self-efficacy, Empathy	.350[c]	0.122	0.094	2.20469	0.017	1.836	0.179
3 Resilience, Self-efficacy, Empathy SECs	.369[d]	.136	.099	2.19870	0.014	1.507	0.223

a. Dependent Variable: Psychological well-being

Table 4.12 presents the results of the ANOVA analysis, which demonstrates the significance of the models. The p-value for the F statistic was < .05 in the fourth model. This model was statistically significant [F (4, 92) = 3.632; p = .009.] and it also meant that at least one of the independent variables was a significant predictor of psychological well-being as is indicated by a large *F* value and a small significance level.

Table 4. 12 Psychological Well-being, SECs, and Predisposing Social-Emotional Factors ANOVA Summary

		SS	df	M S	F	Sig.
1 Resilience	Regression	44.401	1	44.401	8.963	.004[b]
	Residual	470.586	95	4.954		
	Total	514.987	96			
2 Resilience, Self-efficacy	Regression	54.024	2	27.012	5.508	.005[c]
	Residual	460.964	94	4.904		
	Total	514.987	96			
3 Resilience Self-efficacy Empathy	Regression	62.948	3	20.983	4.317	.007[d]
	Residual	452.040	93	4.861		
	Total	514.987	96			
4 Resilience Self-efficacy Empathy SECs	Regression	70.235	4	17.559	3.632	.009 [e]
	Residual	444.753	92	4.834		
	Total	514.987	96			

a. Dependent Variable: Psychological Well-being

Table 4.13 displays the coefficient results. The p column suggests only the independent variable of resilience ($p < 0.05$) predicted psychological well-being on an individual basis. Resilience had a weak positive effect on psychological well-being. More specifically, an individual with low levels of resilience is expected to have low levels of psychological well-being. Conversely, an individual with high levels of resilience is expected to have high levels of psychological well-being. SECs (p=0.223), self-efficacy (p=0.167), and empathy (p=0.224) were not significant predictors of psychological well-being after controlling for resilience.

Table 4. 13 Hierarchical Regression Analysis for Psychological Well-being

	Model	B	Std. Error	Beta	t	Sig.
1	(Constant)	11.139	1.487		7.490	0.000
	Resilience	0.148	0.049	0.294	2.994	0.004
2	(Constant)	8.894	2.181		4.078	0.000
	Resilience	0.128	0.051	0.254	2.506	0.014
	Self-efficacy	0.395	0.282	0.142	1.401	0.165
3	(Constant)	9.745	2.260		4.312	0.000
	Resilience	0.150	0.053	0.297	2.805	0.006
	Self-efficacy	0.425	0.282	0.153	1.508	0.135
	Empathy	-0.084	0.062	-0.139	-1.355	0.179
4	(Constant)	6.651	3.381		1.967	0.052
	Resilience	0.122	.058	0.241	2.106	0.038
	Self-efficacy	0.393	.282	0.141	1.394	0.167
	Empathy	-0.076	.062	-0.126	-1.224	0.224
	SECs	0.995	0.811	0.132	1.228	0.223

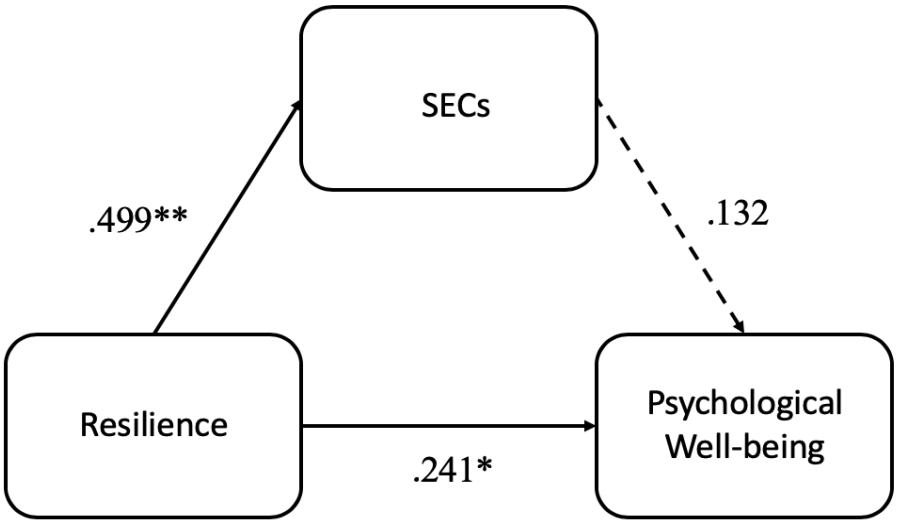
a. Dependent Variable: Psychological well-being

The results of the hierarchical regression indicated that the four predictors explained 13.6% of the variance in psychological well-being (R^2 =.122, F (3,93) =4.317; p = .007). In the first model, resilience explained 8.6% of the variance in psychological well-being (R^2 Change = .086). In the second model, the introduction of self-efficacy explained an additional 1.9% of the

variance in psychological well-being, after controlling for resilience (R^2 Change = .019). In the third model, empathy explained an additional 1.7% of the variance in psychological well-being, after controlling for resilience and self-self-efficacy (R^2 Change = .017). In the fourth model, SECs explained an additional 1.4% of the variance in psychological well-being, after controlling for resilience, self-self-efficacy, and empathy (R^2 Change = .014). While resilience contributed significantly to predict psychological well-being in pre-service teachers (β = .241, p=.038), SECs (β = .132, p=.223), self-efficacy (β = .141, p=.167), and empathy did not (β =-.126, p=.224).

4.3.4. Summary of the results of the regression analyses

The hierarchical regression analysis revealed that pre-service teachers' levels of resilience had a significant but weak predictive effect on their levels of psychological well-being. Resilience was also positively associated with psychological well-being (Figure 4.1). This means that pre-service teachers who perceived themselves as having the ability to adapt to and cope with unexpected events and maintain positivity in the face of stress were more satisfied with life, experienced more positive feelings, and felt that their life was more meaningful. Contrary to expectations, teachers' SECs, self-efficacy, and empathy were not significant predictors of teacher's psychological well-being after controlling for resilience.



Note: standardized regression weights reported. * p < .05. ** p < .01. *** p < .001

Figure 4. 1 Structural Model of relations among Predisposing factors, SECs, and Psychological Well-being.

4.4. Discussion

In this study, the relationships among SECs and predisposing factors such as resilience, self-efficacy, and empathy were examined. The researcher also investigated which of these attributes predict psychological well-being. Resilience significantly predicted SECs. Pre-service teachers who had higher levels of resilience had higher levels of SECs. Previous studies examining the association between teacher candidates' levels of resilience and emotional competence suggested that teacher candidates showing higher levels of resilience would also demonstrate higher levels of emotional competence (Forcina, 2012; Tait, 2008; Mansfield, Beltman, Price, & McConney, 2012). Crane et al. (2017) suggested that resilience facilitates the acquisition of competencies during stressful situations by helping individuals to experience more positive emotions, perceive challenges as opportunities to grow, give them confidence in their ability to solve problems, and

connect better with others. According to Ee and Chang (2010), “teacher candidates’ resilient skills deepened their emotional awareness and interpersonal skills and increased their ability to stay focused and find meaning in their lives” (p. 326). Furthermore, resiliency and social-emotional competencies promote similar skills in teachers, including their ability to regulate their emotions, build a strong sense of purpose, trust in their ability to solve problems, and establish strong support groups (Bouillet, Pavin Ivanec, & Miljević-Riđički, 2014; Burnham, 2009; Thompson, 2016). Poulou (2007) proposed that resilience and SECs should be conceptualized as interrelated concepts due to their similarities. However, Poulou (2007) also argued that the SEL framework enhances the resilience framework because the resilience framework only promotes a limited set of competencies (Poulou, 2007).

Teacher candidates reported moderate to high levels of psychological well-being (M = 15.5 SD = 2.3) implying that teacher candidates have good self-esteem, enjoy life, feel that their life is meaningful, and rarely have negative feelings. With respect to predicting well-being, resilience was a significant, albeit weak predictor of psychological well-being in pre-service teachers. Previous studies with other population groups revealed that resilience had a stronger predictive effect on psychological well-being. For example, Bouillet et al. (2014) found that a high level of resilience significantly predicted kindergarten teachers’ well-being. Meanwhile, Richards et al. (2016) indicated that elementary and secondary teachers who had higher levels of resilience felt less exhaustion, greater well-being, and job satisfaction. Resilience also influenced in a positive and significant way how pre-service teachers in Malaysia perceived stress in their practicums (Ngui & Lay 2017). Teachers with high levels of resilience are more capable of developing healthy strategies that help cope with the adversities they continually encounter in their jobs, have higher levels of life satisfaction, and low levels of burnout and mental health

problems (Spurgeon & Thompson, 2018). Individuals who had high levels of resiliency also have positive mindsets, experienced more positive emotions, and were more flexible to adapt to new situations (Soave, 2014).

In this study, there was a significant relationship between pre-service teachers' levels of SECs and their levels of psychological well-being. However, pre-service teachers' levels of SECs did not predict significantly their levels of psychological well-being over and above their levels of resilience. Pre-service teachers' resilience accounted for the same variance in psychological well-being as pre-service teachers' SECs, thereby reducing the importance of SECs in the model. In previous studies, the predictive relationship between teachers' social-emotional competencies and well-being has been well established (Jennings & Greenberg, 2009; Oberle & Schonert-Reichl, 2017). Various studies had demonstrated that when teachers' levels social-emotional competencies were improved through SEL programs, they also improved their levels of well-being (Domitrovich et al., 2016; Harris et al., 2016; Schussler, Jennings, Sharp, & Frank, 2016). Teachers who have high levels of SECs also have high levels of well-being, while teachers who have low levels of SECs have low levels of well-being and high levels of stress (Jennings & Greenberg, 2009). Therefore, teachers' and pre-service teachers' well-being might be improved by promoting the development of their SECs (Collie & Perry, 2019). For example, SEL training programs that focused on the development of teachers' and pre-service teachers' emotional awareness and emotional regulation skills experienced benefits related to their psychological well-being, including greater job satisfaction, improvements in their mental health, and a reduction in their levels of burnout (Brackett et al., 2010; Hue & Lau, 2015). A possible explanation for the lack of predictive power of SECs after controlling for resilience may be due to the nature of the measure of SECs, as this measure did not include specific items on decision-

making or problem-solving, which are known to be competencies that contribute to individuals' psychological well-being (Luk, Chan, Cheong, & Ko, 2010). Also, perhaps the study findings would have been different if there have been more participants that had more teaching experience and who rated their psychological well-being as low.

Contrary to the literature, predisposing factors including self-efficacy and empathy were not found to be significant predictors of either SECs or psychological well-being. A possible explanation for these results was pre-service teachers' limited teaching experience. The self-report measure of self-efficacy used in this study examined pre-service teachers perceived levels of control or influence over various aspects of teaching (instructional strategies, classroom management, and student engagement). However, when pre-service teachers completed the self-efficacy scale, they had limited or no teaching experience to make reliable assumptions about their abilities in the classroom. Additionally, it was noted that the data from the empathy scale had a negative skew distribution (i.e., more values are concentrated on the right side of the distribution graph), which might suggest that pre-service teachers answered it in a socially desirable manner, which may explain why the empathy measure contributed so little to either model.

4.4.1. Limitations and future directions

There were some limitations in this study. The study had a relatively small sample size, but the findings are similar to other studies and reflected the perspectives of teacher candidates from southwestern Ontario (Soave, 2014; Vesely-Maillefer, 2015). Caution should be taken when generalizing the results of this study to other contexts (e.g., other provinces of Canada). Additionally, the cross-sectional nature of the study is also a limitation because pre-service teachers' perceptions of their attributes, competencies, and psychological well-being are likely to

change over time. Results may also have differed if they had been surveyed after having more teaching experience as part of their practicum.

Another limitation was the reliance self-report measures[5], which are not objective measures of pre-service teachers' abilities and are subject to a social desirability bias. Self-reported measures document teachers' beliefs, perceptions, and expectations more than providing an actual evaluation of performance or skills. Additionally, there were limited tools available to measure CASEL's five core social-emotional competencies in pre-service and in-service teachers (Zimmer & Zordan, 2017). Therefore, future research should focus on developing objective measures that evaluate pre-service and in-service teachers' five core social and emotional competencies. Future studies should also include qualitative tools such as interviews or behavioural observations to have a more comprehensive understanding of pre-service teachers' attributes, social-emotional competencies, and well-being and the relationship among these variables. Additionally, future research should include other populations such as in-service teachers to strengthen the findings and examine other possible predisposing factors (e.g., moral reasoning and grit) that could help to develop pre-service and in-service teachers' SECs and well-being.

4.5. Conclusion

Pre-service and in-service teachers are required to deal with stressful demands, including managing students' behaviour, adjusting their instructional practices to their students' needs, dealing with their lack of autonomy in their jobs, and acquiring skills for the implementation of new SEL programs. As a result, they may experience negative emotions or feelings such as anger

[5] In the current study we initially planned to also collect ratings from the practicing teachers who supervised the pre-service teachers in the schools. Unfortunately, these measures were returned for fewer than 20% of consenting pre-serve teacher participants and we were not able to use them as an additional source of information.

frustration, and stress (Greenberg, Brown, & Abenavoli, 2016; Jennings, Minnici, & Yoder, 2019; Schmidt & Datnow, 2005; Reyes, Brackett, Rivers, Elbertson, & Salovey, 2012). Although resilience explained a small amount the variance and had a weak significant predictive effect on psychological well-being, similar studies with larger samples reported higher predictive effects (Johnson et al., 2014; Soave, 2014). Furthermore, pre-service teachers' levels of SECs were significant predictors of their levels of psychological well-being. However, after controlling for resilience, pre-service teachers' SECs were no longer significant predictors of psychological well-being. The relatively small sample size may have affected the results. Furthermore, only a small proportion of the participants had teaching experience, which limited their ability to objectively assess their social-emotional competencies in the classroom.

Based on the results of this study and previous studies, steps should be taken to improve pre-service and in-service teachers' resilience and social-emotional competencies, and in that way, support pre-service and in-service teachers' psychological well-being (Richards et al., 2016). For example, by increasing awareness regarding the role of resilience in predicting pre-service teachers' SECs and the contribution of resilience and pre-service teachers' SECs on well-being, it will be possible the improvement of SEL training programs. Additionally, by creating policies and practices that can assist in the development of pre-service teachers' SECs and resilience during pre-service teacher education, it will be possible to support teachers' well-being and the domains of well-being including teacher-student relationships, life satisfaction, and confidence in themselves and in their competencies (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Jennings & Greenberg, 2009).

Teacher education should offer self-care and self-compassion practices that improve pre-service teachers' resilience and SECs (Ee & Chang, 2010). Additionally, offering a mandatory

course that emphasizes the development of the 5 core social-emotional competencies promoted by CASEL and the application of SEL strategies over theoretical knowledge as part of their general teacher training will make pre-service teachers more prepared to promote SEL in the classroom (Waajid, Garner, & Owen, 2013). Additionally, ensuring that pre-service teachers have the opportunity to apply SEL strategies during their practicums while they are supervised by teachers, who have expertise in implementing SEL programs, could help them to improve their SEL practices (Schonert-Reichl, Hanson-Peterson, & Hymel, 2015). Pre-service and in-service teachers should also receive training in mindfulness-based programs such as Cultivating Awareness and Resilience in Education (CARE), Community Approach to Learning Mindfully (CALM), or The Inner Resilience Program (IRP). These programs are designed to improve teachers' skills, such as self-awareness, emotional regulation, anger management, conflict resolution, problem-solving, and coping skills (Hue & Lau, 2015).

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Chapter 5: Conclusion

Teacher education provides an opportunity to facilitate teachers' development of social-emotional competencies. Considering the limited support that teachers receive for the development of their SECs and the little knowledge available on this subject, studies that explore pre-service teachers' SECs and their perspectives about SEL may provide insight into the factors that foster teachers' SECs and psychological well-being. To that end, the purpose of this dissertation was fourfold 1) to explore teacher candidates' perspectives of what it means to be a socially and emotionally competent teacher, 2) to identify the social and emotional attributes that teacher candidates most value to develop a structured conceptualization of teachers' SECs, 3) to examine some predisposing attributes that could lead to the development of pre-service teachers' SECs, and 4) to determine the effect of pre-service teachers' SECs on their levels of well-being over and above predisposing factors.

The two studies in this dissertation attempted to address research gaps in the literature on teachers' and pre-service teachers' SECs. In both studies, participants included first-year teacher candidates from a large university in southern Ontario. In the first study, 54 first-year pre-service teachers enrolled in the Social-Emotional Learning course participated in the first phase of the group concept mapping activity as part of a regular, in-class activity. However, only ten pre-service teachers out of the 54 volunteered to participate in the following phases, including sorting, labeling, and rating the statements generated in the first phase. In the second study, 97 pre-service teachers completed online surveys in the fall semester of 2017.

Data collected through the online surveys were analyzed using hierarchic regression analyses, while the data from the concept mapping activity were entered into the Concept Systems Global MaxTM software and analyzed through multidimensional scaling and

hierarchical cluster analysis. Hierarchic regression analyses were used to examine 1) the predictive effect of predisposing factors (i.e., resilience, self-efficacy, and empathy) on SECs and 2) the effect of pre-service teachers' SECs on their levels of well-being over and above predisposing factors. Multidimensional scaling and hierarchical cluster analysis were used to organize conceptual domains of teachers' SECs into a visual cluster map. This chapter discusses the emerging findings from these studies and offers recommendations to teacher education stakeholders and for further research.

5.1. Research Findings and Contributions

Pre-service teachers' attributes. Teacher candidates identified four clusters of teachers' social and emotional attributes, including 1) Communication Skills/Promoting a Positive Classroom Climate, 2) Leadership Skills/ Building a Learning Community, 3) Social Traits/ Building Rapport, and 4) Cognitive and Emotional Skills. In each cluster, teacher candidates identified a broader range of social and emotional attributes than those promoted by the CASEL framework (2015). For example, behaviours such as "check-in with students," "be reliable," and "have resilience" were associated with the concept of socially and emotionally competent teachers. Even though these attributes are somewhat different from those promoted by the CASEL framework, most of the skills identify by teacher candidates fit within the five-competency model of SEL (e.g., "check-in with students" could be considered a relationship skill).

Based on pre-service teachers' ratings, the first three clusters (e.g., behaviours that communicate respect and inclusion, promote a positive classroom climate, create a sense of community, and build rapport) were considered key social and emotional competencies that a teacher should demonstrate in the classroom. The social nature of these behaviours may suggest

that pre-service teachers valued more teachers' behaviours and attitudes that promote social harmony and the social well-being of the classroom community. Attributes that were perceived to be beneficial to one-self or promote self-care (e.g., professional development or emotional competencies such as emotional self-regulation) were considered of less importance. Specific attributes, such as teacher's communication with their students and their ability to model SEL behaviours, were perceived as critical skills that teachers should have when facilitating SEL in the classroom. Consistent with the literature, pre-service teachers believed that modelling SECs, having a strong relationship with their students, and using SEL concepts in their daily interactions are the most important manifestations of teachers' SECs (Becker et al., 2014; Matson, 2017; Oberle & Schonert-Reichl, 2016; Huitt, 2009). This finding also emphasizes the need for developing teachers' SECs as they need to be socially and emotionally competent to model these competencies to their students (Weissberg et al., 2013). Conversely, attributes such as "good time-management skills," "humble," and "concise" obtained the lowest ratings. Pre-service teachers might not feel motivated to pursue attributes like humility as often as other attributes because these attributes could not fit with their moral beliefs, or they think these attributes could not help them with their professional practice (Ruyter & Kole, 2010).

Pre-service Teachers' Resilience. Results from the online surveys revealed that the only predisposing factor from the model (i.e., resilience, self-efficacy, and empathy) that significantly predicted SECs was resilience. In other words, teacher candidates who had higher levels of resilience also had higher levels of SECs. Teachers' resilience facilitates the acquisition of social and emotional competencies by sharing some common characteristics, including teachers' ability to identify and regulate their emotions, adapt to difficult situations, trust in their capacity to solve problems, and establish strong support groups (Day, 2012; Poulou, 2007). Teachers who

demonstrated a collective level of resilience also developed social competence as a coping mechanism that helped them to establish a supportive environment and share social resources (Williams & Drury, 2011).

Resilience was also a significant, albeit a weak predictor of psychological well-being in pre-service teachers. Previous studies with similar population groups showed a stronger predictive effect. For example, teachers' levels of resilience were strong predictors of psychological well-being and job satisfaction (Richards et al., 2016). Mansfield and his colleagues (2016) indicated that teachers' psychological well-being also increases as the result of being in a collaborative and supportive environment that provides resources and strategies to develop coping skills. In another study, pre-service teachers' levels of stress in their practicums were significantly influenced by pre-service teachers' levels of resilience (Ngui & Lay 2017).

Pre-service Teachers' SECs. In this study, pre-service teachers' SECs were significant predictors of psychological well-being. However, after controlling for pre-service teachers' levels of resilience, pre-service teachers' levels of SECs were no longer significant predictors of psychological well-being. In previous studies, the role of teachers' SECs in predicting well-being has been examined, and the results indicated that teachers' levels of well-being could be improved by boosting their levels of SECs (Brackett et al., 2010; Collie & Perry, 2019; Hue & Lau, 2015; Jennings & Greenberg, 2009; Palomera et al., 2017).

Pre-service Teachers' Well-being. Teacher candidates who participated in this study reported moderate to high levels of psychological well-being. The relatively positive level of well-being among participants likely affected the results of this study; there might have been more significant findings with a more normal distribution of well-being. In this sample, teacher

candidates' levels of psychological well-being were influenced by their levels of resilience and SECs. Teacher candidates who often use active coping strategies (i.e., the use of social resources, time-management strategies, and goal setting) have better psychological well-being (Väisänen, Pietarinen, Pyhältö, Toom, & Soini, 2018). Teachers and teacher candidates, who were trained in the implementation of SEL programs, have also demonstrated to have high levels of psychological well-being and low-stress levels (Dorman, 2015). Schools where the staff work collaboratively to support resilience and social-emotional learning practices have shown to be effective in promoting well-being among their members (Mansfield, Beltman, Broadley, & Weatherby-Fell, 2016; Schonert-Reichl, 2017). According to these findings, topics like teacher self-care and SEL should be incorporated into the teacher education curriculum.

Contributions to practice. The four-cluster map created in this study showed that pre-service teachers acknowledge some attributes related to the CASEL framework such as "offer SEL strategies," "promote healthy social relationships," and "have the ability to regulate their emotions." However, pre-service teachers also perceived a broader range of social and emotional attributes such as "leadership," "resilience," "professional development," and moral attributes such as "humble." The variety of the social and emotional attributes that pre-service teachers identified in the brainstorming activity provided a more structured and comprehensive conceptualization of teachers' SECs.

The high value that pre-service teachers ascribed to some attributes provided some insight into the attributes that they consider as important to develop to become socially and emotionally competent. The development of attributes that pre-service teachers most value, including "model the behaviour they want their students to exhibit and make students feel accepted and safe" in teacher education programs could provide them with the confidence to practice these skills in the

classroom and the motivation to continue growing professionally and developing their SECs. Jennings and Greenberg (2009) stated that teacher education focused on the development of social and emotional competencies in pre-service teachers would help future teachers to become more confident in demonstrating their SECs in the classroom and implementing SEL programs. These findings are consistent with the self-determination theory that indicates that teachers have psychological needs (i.e., autonomy, competence, and relatedness) that, when fulfilled by the social context, improve their commitment to achieving educational objectives (Ryan & Deci, 2017).

This study also contributed to the SEL literature by establishing a predictive relationship between 1) pre-service teachers' resilience and SECs, 2) resilience and psychological well-being, and 3) pre-service teachers' SECs and psychological well-being. However, in this study, pre-service teachers' resilience accounted for the same variance in psychological well-being as pre-service teachers' SECs, thereby reducing the importance of SECs in the model. These findings suggest that pre-service teachers' resilience and SECs should be promoted and strengthened through teacher education programs to improve pre-service teachers' SEL practices and well-being.

5.2. Implications of study findings

Implications for research. Pre-service teachers should continuously be the subject of research, particularly because their input can lead to improvements in teacher education programs (Selvi, 2010). However, future studies should include the perspectives of in-service teachers and pre-service teachers from other regions or provinces of Canada (e.g., Manitoba) to strengthen the findings and obtain more generable results.

Resilience was identified as a predisposing factor that predicts social-emotional competencies and psychological well-being among pre-service teachers. However, the concept of resilience involves many different components. Studies that examine the specific elements of resilience that develop pre-service teachers' SECs and well-being are necessary to understand better the causal relationship between 1) resilience and SECs and 2) resilience and well-being. Furthermore, research is necessary pertaining to the specific social-emotional competencies that are influenced by teachers' resilience . Future studies should also examine other possible predisposing factors (e.g., moral reasoning, grit) that could predict teachers' SECs and well-being to build a stronger model for the improvement of teachers' SECs and well-being.

There are a limited number of measures available to examine pre-service and in-service teachers' social-emotional competencies. Aditionally, most of the measures that assess teachers' SECs are self-reports that are subject to a social desirability bias. Future research should focus on developing objective measures that assess the CASEL's five core social-emotional competencies in pre-service and in-service teachers and determining the specific teachers' SECs that predict psychological well-being. A more comprehensive examination of pre-service teachers' perspectives should also include qualitative tools such as interviews or behavioural observations.

Unlike the CASEL framework that provides the same level of importance to the social and emotional competencies in its model, the way that teacher candidates rated the social and emotional attributes suggest that some teachers' SECs are perceived most valuable than others. From a developmental perspective, a hierarchical model also suggests that some skills could serve as foundations for other ones (Hagen, 2013). Therefore, research should focus on determining if there is a predictive relationship among clusters/attributes and, if so, identify the attributes that should be mastered first before moving to the next set.

5.3 Implications for the school system, policy, and teacher education programs.

The integration of SEL in schools necessitates a systemic approach in which the community, including the school system and government structures, share a sense of accountability for achieving SEL objectives. The development of students' SECs would be more effective when the educational system gives priority to SEL and develops strategies for collaboration across the community, educational sectors, and government agencies (Fagan, Hawkins, & Shapiro, 2015). This underlines the need for a shift in perspectives from a teacher-focused orientation to a community-focused one. Based on the results of this study, steps should be taken to establish a collaborative strategy to promote SEL and support the development of pre-service and in-service teachers' resilience and social-emotional competencies (Richards et al., 2016). The degree of support provided by the educational system, in addition to the level of self-efficacy and autonomy among teachers and teacher candidates, might predict their level of disposition to teach new skills and implement SEL programs (Pearsonm & Moomaw, 2005). For example, embedding SEL into teacher education by offering a mandatory course that emphasizes the development of social-emotional skills and strategies over theoretical knowledge as part of their general teacher training will make pre-service teachers feel more prepared to promote SEL in the classroom (Waajid, Garner, and Owen, 2013). Additionally, teacher candidates could learn more about how to implement SEL in the classroom by observing and being supervised by experienced teachers in their practicums (Schonert-Reichl, Hanson-Peterson, & Hymel, 2015). Providing pre-service teachers with the opportunity of reflecting on and discussing teachers' resilience and social-emotional competencies could also help them to develop a common language and a shared understanding of the SEL competencies that they need to demonstrate in the classroom. Additionally, the creation and implementation of policies that require the

certification of teachers in SEL and the development of SEL training programs specially designed for promoting teachers' SECs and resilience could be a strategy to foster teachers' SEL practices.

5.4. Conclusion

Pre-service teachers' perspectives provided valuable information regarding the attributes that define socially and emotionally competent teachers. Congruent with the SEL framework, pre-service teachers identified attributes that promote healthy relationships in the classroom, foster a positive classroom climate, and increase students' sense of belonging. Participants also provided a broader view of attributes related to teachers' SECs, including leadership, professional development, and cognitive skills. Pre-service teachers perceived attributes such as modeling SECs and establishing good communication with their students as the most valuable to facilitate the social-emotional learning curricula in the classroom.

Findings from the online surveys suggest that resilience significantly predicted pre-service teachers' SECs. Additionally, resilience was a significant, albeit a weak predictor of psychological well-being in pre-service teachers. Facilitating the improvement of pre-service and in-service teachers' levels of resilience will improve their levels of SECs and, consequently, their levels of psychological well-being. A collaborative approach and the extent to which the educational system provides teachers and teacher candidates with the opportunity to satisfy their needs for autonomy, competence, and relatedness may ultimately contribute to the integration of SEL into the school community (Orsini, Binnie, & Wilson, 2016). This dissertation has relevance for pre-service teachers, teachers, teacher education providers, and SEL program developers.

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Appendix A. The Western University Non- Medical Research Ethics Broad (NMREB) Approval

Western Research

Date: 21 August 2018

To: Dr. Claire Crooks

Project ID: 109461

Study Title: Social-Emotional Competencies (SECs) in Pre-service Teachers: Predisposing Social-Emotional Factors and the Role of SECs in Psychological Well-being

Application Type: NMREB Amendment Form

Review Type: Delegated

Full Board Reporting Date: September 7 2018

Date Approval Issued: 21/Aug/2018

REB Approval Expiry Date: 01/Aug/2019

Dear Dr. Claire Crooks,

The Western University Non-Medical Research Ethics Board (NMREB) has reviewed and approved the WREM application form for the amendment, as of the date noted above.

Documents Approved:

Document Name	Document Type	Document Date	Document Version
participant consent form August 16, 2018	Written Consent/Assent	16/Aug/2018	
Protocol_clean August 16, 2018	Protocol	16/Aug/2018	
Teachers SEC Background Questionnaire	Paper Survey	10/Jul/2018	
verbal recruitment script august 18, 2018	Recruitment Materials	16/Aug/2018	1

REB members involved in the research project do not participate in the review, discussion or decision.

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.

Please do not hesitate to contact us if you have any questions.

Sincerely,

Kelly Patterson, Research Ethics Officer on behalf of Dr. Randal Graham, NMREB Chair

Note: This correspondence includes an electronic signature (validation and approval via an online system that is compliant with all regulations).

Appendix B. Letter of Information

Letter of information

Invitation to participate

You are being invited to participate in this study because we are interested in first-year pre-service teachers' conceptualizations of the teachers' social-emotional competencies.

Purpose of the letter

The results of this study may improve pre-service teacher education and could help to create policies that support the development of SECs in pre-service teachers and teachers.

Purpose of the study

We are exploring first-year pre-service teachers' perceptions of the skills and attributes of socially and emotionally competent teachers.

Inclusion criteria

Pre-service teachers in their 1st semester of the Teacher Education Program, who are enrolled in the EDUC 5481 Social and Emotional Learning course at Western University.

Study procedures

If you agree to be involved in the study, you may be asked to participate in two data collection periods. The first data collection period will occur during the first class of EDUC 5481 and embedded in the course content as a warm-up activity. You will be asked to read and sign a consent form to participate in the warm-up activity called "Graffiti Wall" and then, you will complete a brief demographic questionnaire. After you complete the demographic questionnaire, your participation in the graffiti wall activity will require that you go around the room in small groups and write on chart papers a list of ideas in response to a focus statement prompt. The focus statement is "what does a teacher who develops social-emotional competencies in children look like/sound like/ feel like? This activity will be open into a group discussion and should take approximately 30 minutes. The second data collection period will occur the following week and you will be asked to attend a one-hour evening session, where you will sort the statements previously formulated in the graffiti wall activity into thematic domains in a

way that makes sense to you, name each domain, and rate the statements based on their importance.

Possible risks and harms
There are no known risks for participating in the study.

Possible benefits
Potential benefits to you as a participant include the opportunity to reflect on the use of social-emotional competencies in your work with students.

Compensation
To thank you for your time and assistance, a light dinner will be provided at the close of the evening session.

Voluntary participation
Your participation in this study is voluntary. You may refuse to participate or complete only one part of the study with no effect on your academic standing. Pre-service teachers who not provide consent will be able to participate in the warm-up activity but their answers will be written in a chart paper placed in a specific location on the classroom wall and their answers will be excluded from the analysis.

Confidentiality
Strict procedures will be maintained to ensure confidentiality. When reporting these results, no names or identifying information will be used. The researcher will keep all data in a secure and confidential location for a minimum of 7 years. Materials created and used during the two data collection periods will be placed in locked cabinets and data will be housed in a secured, password-protected computer at the Centre for School Mental Health. Representatives of the University of Western Ontario Non-Medical Research Ethics Board may require access to your study-related records to monitor the conduct of the research.

Appendix C. Background Questionnaire

Q8 Please indicate the following demographic information about yourself.

What is your gender?

- ❍ Female
- ❍ Male
- ❍ Other (Specify) _____

Q9 How old are you?

- ❍ □ Under 25
- ❍ □ 25-29
- ❍ □ 30-39
- ❍ □ 40-49
- ❍ □ 50-59
- ❍ □ 60 or older

Q10 What is your ethnicity?

- ❍ □ Indigenous (including First Nations, Metis and Inuit)
- ❍ □ Black or African Canadian
- ❍ □ Asian
- ❍ □ Latino/a or Hispanic
- ❍ □ White
- ❍ □ Pacific Islander
- ❍ □ Other

Q11 What is the highest degree or level of education you have completed?

- ❍ □ High school diploma
- ❍ □ College Certificate
- ❍ □ Bachelor's degree
- ❍ □ Master's degree
- ❍ □ Doctorate

Q12 What is your program stream?

- ❍ Primary-Junior
- ❍ Junior-Intermediate
- ❍ Intermediate-Senior

Q13 What is your specialty area?

- ❍ International Education
- ❍ Early Childhood Education
- ❍ Urban Education
- ❍ French (Elementary)
- ❍ French (Secondary)
- ❍ STEM Education
- ❍ Advanced Studies in the Psychology of Achievement, Inclusion, & Mental Health

Q14 How many years of teaching experience do you have?

- ❍ None
- ❍ 1
- ❍ 2
- ❍ 3
- ❍ 4
- ❍ 5
- ❍ More than 5

Q15 Please write other in-school experience or qualifications you have completed (if applicable):

_____

Appendix D. Sorting Activity.

Q3 Here is a list of 74 statements that relate to the question "What does a teacher who promotes social-emotional competencies in children look like/sound like/feel like?" We are asking for your help in sorting these statements into groups that make sense to you. When ready, please group every statement. **You can sort the statements into as many or as few groups as possible. No statement may be in a group twice. You must create more than one group and you may have groups with only one statement.**

Q4 What name would you give to the groups you just sorted above?

- Group 1 _____
- Group 2 _____
- Group 3 _____
- Group 4 _____
- Group 5 _____
- Group 6 _____
- Group 7 _____
- Group 8 _____
- Group 9 _____
- Group 10 _____
- Group 11 _____
- Group 12 _____

Page Break

Appendix E. Rating Activity.

Q5 Please, take a few minutes and rate each statement on a scale of 1 (not at all important) to 5 (extremely important) on how important you think this attribute is in defining socially and emotionally competent teachers.

	Not at all important	Slightly important	Moderately important	Very important	Extremely important
smiling	❍	❍	❍	❍	❍
approachable	❍	❍	❍	❍	❍
open to suggestions	❍	❍	❍	❍	❍
open-minded	❍	❍	❍	❍	❍
calm	❍	❍	❍	❍	❍
consistent	❍	❍	❍	❍	❍
practice active listening	❍	❍	❍	❍	❍
promote dialogue	❍	❍	❍	❍	❍
friendly	❍	❍	❍	❍	❍
take responsibility for their actions	❍	❍	❍	❍	❍
aware of the impact of their actions	❍	❍	❍	❍	❍
apologetic when wrong	❍	❍	❍	❍	❍
inclusive	❍	❍	❍	❍	❍
use age-appropriate language	❍	❍	❍	❍	❍

check in with students	❍	❍	❍	❍	❍
resourceful	❍	❍	❍	❍	❍
offer SEL strategies to students	❍	❍	❍	❍	❍
comforting	❍	❍	❍	❍	❍
build SEL competencies	❍	❍	❍	❍	❍
challenge students to improve themselves in a positive way	❍	❍	❍	❍	❍
challenge themselves to continue growing and learning	❍	❍	❍	❍	❍
aware of students' needs	❍	❍	❍	❍	❍
gentle	❍	❍	❍	❍	❍
supportive	❍	❍	❍	❍	❍
promote healthy social relationships	❍	❍	❍	❍	❍
have positive interactions with students and colleagues	❍	❍	❍	❍	❍
promote a safe space	❍	❍	❍	❍	❍
patient	❍	❍	❍	❍	❍
warm	❍	❍	❍	❍	❍

maintain confidentiality	❍	❍	❍	❍	❍
respectful	❍	❍	❍	❍	❍
skilful	❍	❍	❍	❍	❍
encouraging	❍	❍	❍	❍	❍
resilient	❍	❍	❍	❍	❍
reliable	❍	❍	❍	❍	❍
grounded	❍	❍	❍	❍	❍
create a classroom community	❍	❍	❍	❍	❍
make students feel understood	❍	❍	❍	❍	❍
curious	❍	❍	❍	❍	❍
compassioned	❍	❍	❍	❍	❍
show confidence in themselves	❍	❍	❍	❍	❍
have a sense of humour	❍	❍	❍	❍	❍
enthusiastic	❍	❍	❍	❍	❍
empathetic	❍	❍	❍	❍	❍
genuine	❍	❍	❍	❍	❍
care for students	❍	❍	❍	❍	❍
make students feel that they can be themselves	❍	❍	❍	❍	❍

have the ability to regulate their emotions	❍	❍	❍	❍	❍
have a positive self-image	❍	❍	❍	❍	❍
diverse/ bring a range of views and instructional practices into the classroom	❍	❍	❍	❍	❍
perseverant	❍	❍	❍	❍	❍
determined	❍	❍	❍	❍	❍
kind	❍	❍	❍	❍	❍
knowledgeable	❍	❍	❍	❍	❍
organized	❍	❍	❍	❍	❍
have self-efficacy	❍	❍	❍	❍	❍
model the behaviour they want their students to exhibit	❍	❍	❍	❍	❍
establish good communication with his/her students	❍	❍	❍	❍	❍
have good time-management skills	❍	❍	❍	❍	❍
provide fair attention to all students	❍	❍	❍	❍	❍

seek out professional development	❍	❍	❍	❍	❍
adaptable	❍	❍	❍	❍	❍
humble	❍	❍	❍	❍	❍
provide constructive feedback	❍	❍	❍	❍	❍
concise	❍	❍	❍	❍	❍
focus on positive actions being demonstrated in the classroom	❍	❍	❍	❍	❍
talk to students as equals	❍	❍	❍	❍	❍
explain the "why" behind the actions and consequences (e.g., benefits of regulating emotions)	❍	❍	❍	❍	❍
use a positive tone of voice/ soft-spoken	❍	❍	❍	❍	❍
use positive body language (e.g., facial expressions) when interacting with students	❍	❍	❍	❍	❍

available to talk with students	❍	❍	❍	❍	❍
engage students in learning	❍	❍	❍	❍	❍
act with professionalism	❍	❍	❍	❍	❍
invest in their students	❍	❍	❍	❍	❍

Appendix F. Table. Statements in each cluster, statement bridging values, and importance ratings

	Concept and Statement	**Bridging Value**	**Average Rating**
	Cluster One: Communication skills / Promoting a positive classroom climate	**0.19**	**4.64**
12	apologetic when wrong	0.23	4
13	inclusive	0.18	4.8
14	use age-appropriate language	0.12	4.2
15	check-in with students	0.22	4.9
26	have positive interactions with students and colleagues	0.13	4.5
27	promote a safe space	0.11	4.8

38	make students feel understood	0.42	4.8
46	care for students	0.34	4.9
47	make students feel that they can be themselves	0.1	4.7
58	establish good communication with his/her students	0.11	5
60	provide fair attention to all students	0.11	4.7
64	provide constructive feedback	0.12	4.4
70	use positive body language (e.g., facial expressions) when interacting with students	0.12	4.5
71	available to talk with students	0.34	4.8
	Cluster Two: Leadership Skills/Building a Learning Community	**0.23**	**4.57**
7	practice active listening	0.42	4.6
8	promote dialogue	0.13	4.4
10	take responsibility for their actions	0.39	4.5
17	offer SEL strategies	0.07	4.7
19	build SEL competencies	0.21	4.8
20	challenge students to improve themselves in a positive way	0.04	4.6
21	challenge themselves to continue growing and learning	0.41	4.5
25	promote healthy social relationships	0.04	4.5
30	maintain confidentiality	0.61	4.7
37	create a classroom community	0.23	4.4
57	model the behaviour they want their students to exhibit	0.27	5
66	focus on positive actions being demonstrated in the classroom	0.1	4.5
67	talk to students as equals	0.08	4.1

68	explain the "why" behind the actions and consequences (e.g., benefits of regulating emotions)	0.12	4.6
69	use a positive tone of voice/ soft-spoken	0.25	4.2
72	engage students in learning	0.03	4.7
73	act with professionalism	0.62	4.5
74	invest in their students	0.14	4.9
	Cluster Three: Social Traits/Building Rapport	**0.1**	**4.44**
1	smiling	0.08	4.1
2	approachable	0.09	4.9
5	calm	0.05	4.2
6	consistent	0.15	4.5
9	friendly	0.08	4.5
18	comforting	0.11	4.2
23	gentle	0.21	3.8
24	supportive	0.31	4.7
28	patient	0.1	4.5
29	warm	0.04	4
31	respectful	0.08	4.8
33	encouraging	0.14	4.6
35	reliable	0.02	4.8
40	compassionate	0	4.5
43	enthusiastic	0.09	4.3
44	empathetic	0.08	4.7
45	genuine	0.04	4.7

53	kind	0.08	4.2
	Cluster Four: Cognitive and Emotional Skills	**0.34**	**4**
3	open to suggestions	0.7	4.2
4	open-minded	0.2	4.5
11	aware of the impact of their actions	0.27	4.7
16	resourceful	0.3	4.1
22	aware of students' needs	0.24	4.8
32	skillful	0.14	3.6
34	resilient	0.07	4.3
36	grounded	0.07	4.2
39	curious	0.18	3.6
41	show confidence in themselves	0.54	4.1
42	have a sense of humor	0.57	3.4
48	have the ability to regulate their emotions	0.32	4.6
49	have a positive self-image	0.62	3.9
50	diverse/ bring a range of views and instructional practices into the classroom	1	4.1
51	perseverant	0.07	4.2
52	determined	0.16	4.1
54	knowledgeable	0.58	3.8
55	organized	0.09	3.7
56	have self- efficacy	0.48	4.1
59	have good time-management skills	0.32	3.2
61	seek out professional development	0.82	4.1

62	adaptable	0.09	4.4
63	humble	0.04	3.2
65	concise	0.26	3.2

Appendix G. Email Script for Recruitment

Email Script for Recruitment

Hello,

You are being invited to participate in a study that Dr. Claire Crooks and Ph.D. candidate Arely Rodriguez are conducting. Briefly, the study will examine social-emotional competencies (SECs) among pre-service teachers and look at the role these factors play in pre-service teachers' well-being.

The study involves completing online surveys twice during the fall semester. You will be compensated with a gift card of $15 for each survey completed. When you are completing the second set of surveys, your Associate Teacher (who will be supervising you during your practicum) will also be asked to rate your social and emotional competencies in the classroom. However, Associate Teachers' ratings will have no effect on your practicum evaluation or academic standing.

If you would like to participate in the first data collection period of this study please click on the link below to access the letter of information and consent form and the first survey. The survey needs to be completed by November 2nd, 2017.

https://uwo.eu.qualtrics.com/jfe/form/SV_a05inpkl1CGZ7vL

Thank you very much for your willingness to consider being part of this important research.

Appendix H. Background Questionnaire.

Q17 You indicate your voluntary agreement to participate by typing your student ID number in the following box:

Q1 Please indicate the following demographic information about yourself:

Q2 What is your gender?

Q3 How old are you?
- ❍ Under 25
- ❍ 25-29
- ❍ 30-39
- ❍ 40-49
- ❍ 50-59
- ❍ 60 or older

Q4 What is your ethnicity?
- ❍ □ Indigenous (including First Nations, Metis and Inuit)
- ❍ Black or African Canadian
- ❍ Asian
- ❍ Latino/a or Hispanic
- ❍ White
- ❍ Pacific Islander
- ❍ Other

Q6 What is the highest degree or level of education you have completed?
- ❍ High school diploma
- ❍ College Certificate
- ❍ Bachelor's degree
- ❍ Master's degree
- ❍ Doctorate

Q7 What is your program stream?
- ❍ Primary-Junior
- ❍ Junior-Intermediate
- ❍ Intermediate-Senior

Q8 What is your specialty area?

- ❍ International Education
- ❍ Early Childhood Education
- ❍ Urban Education
- ❍ French (Elementary)
- ❍ French (Secondary)
- ❍ STEM Education
- ❍ Advanced Studies in the Psychology of Achievement, Inclusion, & Mental Health

Q9 How many years of teaching experience do you have?

- ❍ None
- ❍ 1
- ❍ 2
- ❍ 3
- ❍ 4
- ❍ 5
- ❍ More than 5

Q10 Please write other in-school experience or qualifications you have completed (if applicable):

Appendix I. Teacher Sense of Efficacy Scale (TSES).

Q14 This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below.

	(1) Nothing	2	(3) Very little	4	(5) Some influence	6	(7) Quite a bit	8	(9) A great deal
1. How much can you do to get through to the most difficult students?	❍	❍	❍	❍	❍	❍	❍	❍	❍
2. How much can you do to help your students think critically?	❍	❍	❍	❍	❍	❍	❍	❍	❍
3. How much can you do to control disruptive behaviour in the classroom?	❍	❍	❍	❍	❍	❍	❍	❍	❍
4. How much can you do to motivate students who show low interest in schoolwork?	❍	❍	❍	❍	❍	❍	❍	❍	❍
5. To what extent can you make your expectations clear about	❍	❍	❍	❍	❍	❍	❍	❍	❍

student behaviour?									
6. How much can you do to get students to believe they can do well in schoolwork?	❍	❍	❍	❍	❍	❍	❍	❍	❍
7. How well can you respond to difficult questions from your students?	❍	❍	❍	❍	❍	❍	❍	❍	❍
8. How well can you establish routines to keep activities running smoothly?	❍	❍	❍	❍	❍	❍	❍	❍	❍
9. How much can you do to help your students value learning?	❍	❍	❍	❍	❍	❍	❍	❍	❍
10. How much can you gauge student comprehension of what you have taught?	❍	❍	❍	❍	❍	❍	❍	❍	❍
11. To what extent can you craft good questions for your students?	❍	❍	❍	❍	❍	❍	❍	❍	❍
12. How much can you do to	❍	❍	❍	❍	❍	❍	❍	❍	❍

foster student creativity?									
13. How much can you do to get children to follow classroom rules?	❍	❍	❍	❍	❍	❍	❍	❍	❍
14. How much can you do to improve the understanding of a student who is failing?	❍	❍	❍	❍	❍	❍	❍	❍	❍
15. How much can you do to calm a student who is disruptive or noisy?	❍	❍	❍	❍	❍	❍	❍	❍	❍
16. How well can you establish a classroom management system with each group of students?	❍	❍	❍	❍	❍	❍	❍	❍	❍
17. How much can you do to adjust your lessons to the proper level for individual students?	❍	❍	❍	❍	❍	❍	❍	❍	❍
18. How much can you use a variety of assessment strategies?	❍	❍	❍	❍	❍	❍	❍	❍	❍

19. How well can you keep a few problem students from ruining an entire lesson?	❍	❍	❍	❍	❍	❍	❍	❍	❍
20. To what extent can you provide an alternative explanation or example when students are confused?	❍	❍	❍	❍	❍	❍	❍	❍	❍
21. How well can you respond to defiant students?	❍	❍	❍	❍	❍	❍	❍	❍	❍
22. How much can you assist families in helping their children do well in school?	❍	❍	❍	❍	❍	❍	❍	❍	❍
23. How well can you implement alternative strategies in your classroom?	❍	❍	❍	❍	❍	❍	❍	❍	❍
24. How well can you provide appropriate challenges for very capable students?	❍	❍	❍	❍	❍	❍	❍	❍	❍

Appendix J. Email Script for Recruitment (Second Phase).

Email Script for Recruitment

Hello,

You are being sent this email because you participated in the first phase of a study on social and emotional competencies among pre-service teachers. We hope you will also choose to participate in the second data collection period. Specifically, you are being asked to complete another survey, which needs to be completed by October 29th, 2017.

Participants, who complete this survey, will be compensated with a gift card of $15.

If you would like to participate in the second data collection period of this study please click on the link below to access the letter of information and consent form and the survey.

https://uwo.eu.qualtrics.com/jfe/form/SV_575uA8iLj7CEiMt

If you would like more information on this study, please contact the researcher at the contact information provided below.

Appendix K. The World Health Organization Quality of Life-Brief version (WHOQOL-BREF).

Q6 Please choose the answer that appears most appropriate. If you are unsure about which response to give to a question, the first response you think of is often the best one.

	Very poor	Poor	Neither poor nor good	Good	Very Good
1.-How would you rate your quality of life?	❍	❍	❍	❍	❍

Q7 Please choose the answer that appears most appropriate. If you are unsure about which response to give to a question, the first response you think of is often the best one.

	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
2.-How satisfied are you with your health?	❍	❍	❍	❍	❍

Q8 The following 6 questions ask about how much you have experienced certain things in the last four weeks.

	Not at all	A little	A moderate amount	Very much	An extreme amount
3.-To what extent do you feel that physical pain prevents you from doing what you need to do?	❍	❍	❍	❍	❍
4.-How much do you	❍	❍	❍	❍	❍

need any medical treatment to function in your daily life?					
5.-How much do you enjoy life?	❍	❍	❍	❍	❍
6.-To what extent do you feel your life to be meaningful?	❍	❍	❍	❍	❍

Q9 The following questions ask about how much you have experienced certain things in the last four weeks.

	Not at all	A little	A moderate amount	Very much	Extremely
7.-How well are you able to concentrate?	❍	❍	❍	❍	❍
8.-How safe do you feel in your daily life?	❍	❍	❍	❍	❍
9.-How healthy is your physical environment?	❍	❍	❍	❍	❍

Q10 The following questions ask about how completely you experience or were able to do certain things in the last four weeks.

	Not at all	A little	Moderately	Mostly	Completely
10.-Do you have enough	❍	❍	❍	❍	❍

energy for everyday life?					
11.-Are you able to accept your bodily appearance?	❍	❍	❍	❍	❍
12.-Have you enough money to meet your needs?	❍	❍	❍	❍	❍
13.-How available to you is the information that you need in your day-to-day life?	❍	❍	❍	❍	❍
14.-To what extent do you have the opportunity for leisure activities?	❍	❍	❍	❍	❍

Q11 The following questions ask about how completely you experience or were able to do certain things in the last four weeks.

	Very poor	Poor	Neither poor nor good	Good	Very good
15.-How well are you able to get around?	❍	❍	❍	❍	❍

Q12 The following questions ask about how completely you experience or were able to do certain things in the last four weeks.

	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
16.-How satisfied are you with your sleep?	❍	❍	❍	❍	❍
17.-How satisfied are you with your ability to perform your daily living activities?	❍	❍	❍	❍	❍
18.-How satisfied are you with your capacity for work?	❍	❍	❍	❍	❍
19.-How satisfied are you with yourself?	❍	❍	❍	❍	❍
20.-How satisfied are you with your personal relationships?	❍	❍	❍	❍	❍
21.-How satisfied are you with your sex life?	❍	❍	❍	❍	❍
22.-How satisfied are you with the	❍	❍	❍	❍	❍

support you get from your friends?					
23.-How satisfied are you with the conditions of your living place?	❍	❍	❍	❍	❍
24.-How satisfied are you with your access to health services?	❍	❍	❍	❍	❍
25.-How satisfied are you with your transport?	❍	❍	❍	❍	❍

Q13 The following question refers to how often you have felt or experienced certain things in the last four weeks.

	Never	Seldom	Quite often	Very often	Always
26.-How often do you have negative feelings such as blue mood, dispair, anxiety, depression?	❍	❍	❍	❍	❍

Appendix L. Letter of information and consent.

Letter of information and Consent

“Social-Emotional Competencies (SECs) in Pre-service Teachers: Predisposing Social-Emotional Factors and the Role of SECs in Psychological Well-being”

You are being invited to participate in a research study entitled: “Social-Emotional Competencies (SECs) in Pre-service Teachers: Predisposing Social-Emotional Factors and the Role of SECs in Psychological Well-being ”.

The objective of this study is to examine social-emotional competencies (SECs) in the classroom among pre-service teachers and determine their potential impact on pre-service teachers’ well-being. The results of this study may improve pre-service teacher education and could help to create policies that support the development of SECs in pre-service teachers and teachers.

The study involves two data collection periods during the fall semester.

* The first data collection period will be conducted during the second week of your practicum. You can proceed to the online Qualtrics survey by clicking at the bottom of this letter. This introductory page of the Qualtrics online survey package includes a letter of information and consent for you to acknowledge voluntary participation in the study. Your voluntary participation in the study will be acknowledged by typing your student identification number in a box that will appear below the letter of information and consent. Once you acknowledge voluntary participation, you will have a week to complete a survey.

* The second data collection period will be conducted in the third week of October (after your practicum). Pre-service teachers who completed the first survey at the beginning of the academic year will receive an email containing the URL address to the second online Qualtrics survey. You will have a week to complete the second survey.

During the two data collection periods, strict procedures will be maintained to ensure confidentiality. Individual scores will not be reported. We require student ID numbers to link the different surveys together, but as soon as these surveys are linked we will remove student ID numbers and replace them with a random unique ID number.

Potential benefits to you as a participant include the opportunity to reflect on your mental health and the use of your social-emotional competencies in your work with students. There are no known risks for participating in the study.

Safeguards to protect data will include the use of your student ID number and password protected computers to store the data. The researcher will keep all data in a secure and confidential location for a minimum of 5 years. Data will be housed in a secured, password protected computer at the Centre for School Mental Health. Representatives of the University of Western Ontario Non-Medical Research Ethics Board may require access to your study-related records to monitor the conduct of the research.

You will be compensated with a gift card of $15 for each set of measures you complete (a total of two sets of measures).

Your participation in this study is voluntary. You may decide not to be in this study. Even if you consent to participate, you have the right to not answer individual questions or to withdraw from the study at any time. Instructors will not know who will be participating in this study and therefore, participation in this study will not influence participants grades. If you choose not to participate or to leave the study at any time, it will have no effect on your academic standing. Also, if you decide to withdraw from the study, you have the right to request withdrawal of information collected about you. If you wish to have your information removed please let the researcher know. If you choose to withdraw from the study before surveys have been linked and student IDs have been replaced with unique and non-identifying ID's, then we will remove your data from the study. Once data have been linked and student ID's are no longer attached to data, we will be unable to remove data.

If you have questions about this research study, please contact the researcher at the contact information given below.

Version Date: 14/09/2017

Appendix M. Curriculum Vitae

Curriculum Vitae

Name:	Arely Rodriguez.
Honours and Awards:	National Undergraduate Excellence Award 2006 – 2010
	TecMilenio University Graduate Tuition Award TecMilenio University 2010 – 2012
Post-secondary Education and Degrees:	University Modelo, Campus Mérida Merida, Yucatán, México 2005 – 2010 B.A.
	TecMilenio University, Campus Mérida. Merida, Yucatán, México 2010 – 2012 M.A.
	University of Western Ontario London, Ontario, Canada 2015-2020 Ph.D.
Related Work Experience:	Psychotherapist University Modelo, Campus Mérida 2009
	Educational Psychologist Centro de Atención Psicopedagógico de Educación Preescolar (CAPEP) 2010-2012
	High School Teacher Felipe Carrillo Puerto" high school 2014-2015
	Educational Psychologist Unidades de Servicio de Apoyo a la Educación Regular (USAER) 2014-2015
	Practicum Mary J. Wright 2016

Practicum
Dr. Rosanne Field and Associates
2016-2019

Extracurricular Qualifications :

Psychological management of patients with chronic diseases.
University Modelo.
Mérida, Yucatán, México.
2011

Diploma in Child Psychotherapy.
Child Psychotherapy Clinic (CICAPSI),
Mérida, Yucatán, México.
2011.

Early and pre-initial Education
College of Psychologists of the State of Yucatan C.S
Mérida, Yucatán, México
2011

Promoting Positive Mental Health Through Socio-Emotional Learning
PREVNet
Toronto, Ontario, Canada.
2015

WISC-5 and WIAT-III training workshop.
Western University
London, Ontario, Canada.
2016

School Mental Health: Challenges and Emerging Opportunities Conference,Centre for School Mental Health.
Western University.
Banff, Alberta, Canada.
2016

Canadian Conference on Promoting Healthy Relationships for Youth: Breaking Down The Silos In Addressing Mental Health and Violence, Centre for School Mental Health.
Western University.
London, Ontario, Canada.
2017