

Pre-Service Teacher Self-Efficacy for Teaching Emergent Multilingual Learners

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Abstract

With the increasing numbers of emergent multilingual learners (EMLs) in U.S. public schools, it is imperative that all teachers feel confident and competent to teach these students. Teacher self-efficacy is a teacher's belief in their capability to execute teaching tasks. High teacher self-efficacy is positively associated with teacher motivation, job satisfaction, and teacher behaviors related to student academic achievement. This study sought to answer the questions: 1) Are there significant differences in levels of PST self-efficacy for teaching EMLs based on PST educational experience? 2) Are there significant differences in levels of PST self-efficacy for teaching EMLs based on personal background? 3) Is there a significant difference in PST self-efficacy for teaching EMLs based on an interaction between educational experience and personal background? The ELL Education Self-Efficacy Scale (Fu & Wang, 2021) was used to measure PST self-efficacy across three domains, pedagogical content, linguistic, and sociocultural for teaching EMLs. A total of 51 survey responses were analyzed with a two-way MANOVA. The findings indicated no overall significant differences in PST self-efficacy for teaching EMLs based on personal background and educational experience. However, there was a significant mean difference in pedagogical content self-efficacy for teaching EMLs based on educational experience. The findings suggest that practicum experiences with EMLs significantly, positively impact PST perceived efficacy for using appropriate pedagogical content with EMLs. The implications for intentionally designed educational opportunities to foster PST self-efficacy for teaching EMLs are discussed.

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Dedication

To my dear husband Myrle and son Solomon, your love and patience gave me the space to follow my passion and I am forever grateful.

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Glossary

Term	Definition
Emergent Multilingual Learner (EML)	Students who are learning English as a second or additional language. These students are commonly identified by schools as having no or limited English language proficiency.
Pre-service Teacher (PST)	An individual enrolled in a teacher preparation program
English language learner (ELL)	This term is used on the PST Self-Efficacy for Teaching English language Learners Survey to refer to emergent multilingual learners.
Self-efficacy	“belief in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3)

Chapter 1: Introduction

With changing K-12 student demographics across the United States and the globalization of education, it is imperative that teachers feel prepared for instructing and communicating with students and families that are new to English. The ever evolving cultural and linguistic environment within U.S. public school classrooms provides an opportunity for rich and diverse teaching and learning environments. In 2019, 10.4% (5.1 million) U.S. students were emergent multilingual learners (EMLs)¹, an increase from 9.2% in 2010. The majority (68%) of states in the United States had EML student populations of 6% or higher (Irwin et al., 2022). In 2019, Texas (19.6%) and California (18.6%) reported the highest numbers of EMLs in public schools. When considering how to best serve EMLs, it is essential to understand the racial, linguistic, and cultural diversity of EMLs in U.S. public schools. In 2019, of all EMLs, 76.8 % were Hispanic, 10.2% were Asian, 6.5% were white, and 4.3% were Black, and less than 1% were Other races or ethnicities (Irwin et al., 2022). Among the 5.1 million EMLs in U.S. public schools in 2019, the predominate home language was Spanish (3.9 million students) however, the home languages of EMLs across the United States were diverse. The leading languages of EMLs are Arabic, English (multi-lingual households and adopted students with non-English first language), Chinese, and Vietnamese, for a total of 412,000 students (National Center for Education Statistics, 2022b). Additionally, approximately 15% of EMLs in public schools were identified as students with disabilities (Irwin et al., 2022) further adding to the rich diversity of the EML population. School districts in urban areas had the highest proportion of EMLs (14.8%) and although lower, suburban school districts and those in towns reported 10% and 7% of their public school students were EMLs (National Center for Education Statistics, 2022), indicating that schools across geographic areas need to be prepared to meet the academic and sociocultural needs of EMLs. As the proportion of EMLs increases in K-12 schools, general education and content-specific teachers at both elementary and secondary school levels will likely teach EMLs in their classrooms. Teachers are in a unique position to leverage the cultural and

¹ Throughout this paper, the phrase *emergent multilingual learners* (EMLs) is used to refer to students who are learning English as a second or additional language. These students are commonly identified by schools as having no or limited English language proficiency. The term *emergent multilingual learners* shifts focus from a deficit perspective (students without English language proficiency) to an asset-based perspective (all languages used by students have value). The survey instrument uses the term *English Language Learner* because of its widespread use in educational policy and academia.

linguistic diversity among their students in support of student academic achievement and personal development. However, current U.S. school environments do not necessarily lend themselves to meeting this challenge.

Serving the academic needs of EMLs also entails addressing the gaps in academic achievement between EMLs and non-EMLs. In a 2012 study of five states with large proportions of EMLs, a comparison of National Assessment of Educational Progress (NAEP) reading data described a gap in reading achievement: 25% - 52% of fourth grade EMLs compared to 66% - 83% of non-EML fourth graders were at or above the basic level for reading. The gap in reading achievement was even greater among eighth grade students: 20% - 41% of EMLs compared to 74% - 84% of non-EMLs were at or above the basic level for reading (Samson & Collins, 2012). While the reasons for these gaps in achievement between EMLs and non-EMLs are complex, these gaps provide further evidence for the need to center research on teaching and learning of EMLs. Furthermore, investigation of the relationships between student self-efficacy, teacher self-efficacy, and student achievement may provide opportunities to address the achievement gaps.

In 2022, 55% of students in public schools were projected to be non-white, while only 28% of those earning an undergraduate teaching degree or certification were people of color (American Association of Colleges of Teacher Education, 2022). Furthermore, the National Center for Education Statistics (2022a) reported that, 67.3% of teachers taught EMLs, however, only 47.9% had ever taken a course focused on EMLs in their teacher preparation. However, these data only address formal university preparation for teaching EMLs. Additional factors such as teacher beliefs and attitudes toward their students can also impact outcomes for students in general and EMLs specifically (Bryan & Atwater, 2002; Rizzuto, 2017; Walker et al., 2004).

PST beliefs and attitudes are supported by perceived self-efficacy related to instructing and interacting with EMLs. PSTs who were educated in racially, culturally, and linguistically homogeneous K-12 schools and universities may maintain different levels of perceived self-efficacy for teaching multilingual and multicultural students (Zeichner; 2003). High levels of perceived self-efficacy among teachers have been associated with positive teacher attributes such as commitment to teaching, job satisfaction, better goal setting (Durgunoğlu & Hughes, 2010), persistence, student engagement (Gibson & Dembo, 1984),

and ability to predict student success. Additionally, teacher self-efficacy has been associated with student outcomes including motivation, self-efficacy, and achievement (Durgunoğlu & Hughes, 2010; Yough, 2019). Teacher education programs are well-situated to assess pre-service teacher efficacy as a means to understanding supports needed, to develop programming and training to foster PST self-efficacy for teaching EMLs.

Problem Statement

While the number of EMLs is increasing in U.S. schools, the teacher population is predominately monolingual English and from different racial and cultural backgrounds than their students (American Association of Colleges of Teacher Education, 2022; Zeichner, 2003). These demographic characteristics in combination with teacher reported lack of preparedness for teaching EMLs underlie a challenge facing today's teachers and future teachers in meeting the needs of EMLs. Furthermore, the achievement gap between EMLs and non-EMLs signals an imperative need to address the challenges to educational equity for EMLs.

Statement of Purpose

Accurately assessing PST self-efficacy and understanding the relationship between factors that impact self-efficacy for teaching EMLs can illuminate opportunities to promote PST self-efficacy. Ultimately, measuring PST self-efficacy and developing environments to foster it can impact both the teaching workforce and EML achievement.

Research Questions

The research questions addressed in this study examine the impact of PST personal background and educational experience on self-efficacy for teaching EMLs. The study research questions are:

- 1) Are there significant differences in levels of PST self-efficacy for teaching EMLs based on PST educational experience?
- 2) Are there significant differences in levels of PST self-efficacy for teaching EMLs based on personal background?
- 3) Is there a significant difference in PST self-efficacy for teaching EMLs based on an interaction between educational experience and personal background?

Positionality of the Researcher

As a white, female teacher, and having taught education courses while working on a PhD within a rural, western, U.S. university, I have had the opportunity to observe and reflect on learning English as a new language. I have served as a K-12 ESL teacher in three countries and myself completed a graduate level teacher preparation program. I approach language learning as a social endeavor and strongly believe in a functional linguistic perspective. My approach to the research questions posed in this study is also guided by functional theory of language as posited by Halliday (1993; Halliday & Matthiessen, 2013), which ascribes the meaning of language in relation to social context, describing both how and why language varies in relation to language users and social context. I share the perspective that language is always evolving in new contexts (Schleppegrell, 2004). The scale (Fu & Wang, 2021) adapted for this research incorporates self-efficacy measures for linguistic teaching, sociocultural self-efficacy, and pedagogical content for teaching EMLs. The selection of this instrument was intentional, as it includes items that support the necessary linguistic and social domains essential to second language acquisition.

Theoretical Framework

Social cognitive theory (SCT) as proposed by Bandura (1986, 1997) posits that learning happens in a social context and involves interaction between personal factors, the environment, and behavior, in a reciprocal process or “triadic reciprocity” (p. 23, Bandura, 1986). These components are determinants of each other and through reciprocal interactions, result in a given effect. The influence of any given factor will vary for different individuals in different circumstances. Central to SCT as posited by Bandura (1986, 1997) is an individual’s sense of agency, the belief that one can exercise some sense of control over events in one’s life. Human agency influences and is influenced by this triadic reciprocity within their sociocultural context. Within SCT, agency is recognized as occurring in a collective social context. Bandura’s (1986) perspective of social cognitive theory describes five capabilities within human nature: symbolizing capability, forethought capability, vicarious capability, self-regulatory capability, and self-reflective capability (p. 18-21). Through reflection on experiences and knowledge, individuals, “monitor their ideas, act on them or predict occurrences from them, judge the adequacy of their thoughts from the results, and change them accordingly” (p. 21, Bandura, 1986). SCT recognizes that while the self is

socially constructed, individuals themselves also contribute to what they do and what they become, they are proactive and self-regulating as opposed to being controlled by their environment (Pajares & Schunk, 2002).

Perceived self-efficacy refers to “belief in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3). Moreover, self-efficacy involves “a generative capability in which cognitive, social, and behavioral subskills must be organized into integrated courses of action to serve innumerable purposes” (Bandura, 1986, p. 391). Bandura (1997) attributes great importance to perceived self-efficacy, situating it within SCT, attributing it to almost all aspects of human function. Perceived self-efficacy can influence the amount of effort and persistence a person invests in performing a task or behavior. Students with high levels of self-efficacy approach challenges rather than avoiding them and persevere after failure (Pajares & Schunk, 2002). Within social cognitive theory, the constructs of self-efficacy and outcome expectancies operate within conditional relationships.

Outcome expectancies differ from self-efficacy in that they reflect perception of the consequences a behavior will produce. The three main forms of expectancy outcomes are physical, social, and self-evaluative, with each potentially serving as negative or positive expectations (Bandura, 1986). While self-efficacy can highly influence outcome expectancy, it does not account for all outcome expectancy, as social and environmental factors also impact one’s perceived outcomes. Individuals develop a sense of self-efficacy mainly from four sources of information: mastery experiences, vicarious experiences, verbal persuasion, and physiological states (Bandura, 1997). However, as Bandura (1997) explains, the information one receives related to ability, on its own, does not necessarily manifest as perceived self-efficacy. Through cognitive processing involving the input and interaction of personal factors, behavior, the environment, and reflection, perceptions of self-efficacy are generated.

Social cognitive theory and perceived self-efficacy provide a foundation for examination of PST beliefs in their ability to instruct EMLs. Assessing perceived self-efficacy of PSTs before they enter the teaching profession can provide opportunities for teacher preparation programs to foster self-efficacy through mastery experiences, vicarious experiences, verbal persuasion, and mediation of PST physiological states.

Chapter 2: Literature Review

Bandura's (1997) explanation of perceived self-efficacy extends across all people and professions. Perceived self-efficacy among teachers has been extensively studied to examine the relationships between teacher perceived self-efficacy and student achievement, instructional characteristics, job satisfaction, instruction of specific populations, and in specific contexts. (Ashton, 1984; Bandura, 1997; Caprara et al, 2006; Guskey & Passaro, 1994; Klassen et al., 2011; Vieluf et al., 2013). Previous research has also focused on development of instruments to measure teacher perceived self-efficacy for instruction, classroom management, teaching culturally responsive pedagogy, teaching specific content, and teaching specific student populations (Carney 2012; Fu & Wang, 2021; Gibson & Dembo, 1984; Siwatu, 2007; Tschannen-Moran & Woolfolk Hoy, 2001). Literature on PST perceived self-efficacy tends to center on measurement and intervention to increase self-efficacy among PSTs (Clark & Newberry, 2019; Coady et al., 2011; Durgunoğlu & Hughes, 2010; Gibson & Dembo, 1984; Jimenez-Silva et al., 2012; Yough, 2019). A thorough description of perceived self-efficacy and its contributory sources of information will provide a foundation for understanding the previous research on teacher self-efficacy. Subsequently, exploration into the role of teacher and PST perceived self-efficacy, factors that influence self-efficacy, and the impact of perceived self-efficacy on students and learning provide a foundation for understanding and examination of the research questions posed in this study.

Self-Efficacy

The construct of perceived self-efficacy from the perspective of social cognitive theory is an integral part of the self, involving one's perception of their own competence or confidence in their ability to do something. Perceived self-efficacy is rooted in the past experiences of the individual formed from the interaction of personal factors, behavior, and the environment, affecting every aspect of our lives (Bandura, 1997). These perceptions of one's self-efficacy influence persistence in the face of challenge, the effort invested in an endeavor, thoughts and emotional reactions, and accomplishments realized (Bandura, 1986, 1997; Pajares & Miller, 1994; Pajares & Schunk, 2002). Bandura (1986) describes competency as requiring, "both skills and self-beliefs of efficacy to use them effectively" (p. 391). Perceived self-efficacy focuses on judgements or perceptions about one's ability to do something with the skills they possess. Self-efficacy is distinguished from outcome

expectations in that self-efficacy is judgement of capability to accomplish a level of performance and outcome expectancies are judgements of the likely consequences such a behavior will produce (Bandura, 1986). Furthermore, Bandura posits that an accurate appraisal of one's capabilities is important to function successfully. Those who overestimate their capabilities may engage in activities that cause them to fail unnecessarily and those who underestimate their capabilities may limit activities, consequently limiting potentially rewarding experiences.

Self-concept and self-esteem are often used interchangeably with the term self-efficacy; however, these constructs are not interchangeable. Self-concept is less specific, and is related to self-worth associated with perceived competence (Bandura, 1997; Pajares & Miller, 1994). Bandura (1997) differentiated self-esteem and self-efficacy in that self-esteem is a construct concerned with feelings of self-worth. One may perceive their capability irrespective of their feelings of self-worth. Bandura also notes the imperative to distinguish between the two constructs when attempting to measure self-efficacy. Self-efficacy has also been demonstrated as a strong predictor of achievement (Ashton & Webb 1986; Caprara et al., 2006; Pajares & Miller, 1994). Pajares & Miller (1994) identified self-efficacy as a stronger predictor of mathematics performance than prior experience with mathematics, one's math self-concept, and gender. Furthermore, they demonstrated that self-efficacy mediated the effects of these factors on mathematics performance.

Outcome expectancies are beliefs that individuals hold about the consequences or expected outcomes of a particular action. Expectations about outcomes are partly formed and influenced by an individual's beliefs about ability to perform in a particular context (Bandura, 1997; Schunk & Usher, 2012). Bandura (1997) proposes a conditional relationship between outcome expectancies and perceived self-efficacy. An individual has varying levels of self-efficacy in a specific context which influences their behavior; the individual's outcome expectancies then act on or influence the behavior contributing to the outcome or action. Outcome expectancies generally occur as either positive or negative physical, social, or self-evaluative factors which influence an outcome (Bandura, 1997). Individuals with high levels of self-efficacy and beliefs that they can produce a positive outcome are more willing to continue working toward a positive outcome compared to those with lower self-efficacy who may be more willing to give up when encountering difficulty. Even when one believes

they can achieve a positive outcome, without perceived self-efficacy, they may lack the belief that they are competent to organize and enact the desired action (Schunk & Usher, 2012). Furthermore, Shell et al. (1989), in a study of self-efficacy and outcome expectancies among undergraduates, found that self-efficacy beliefs were more strongly related to achievement than outcome expectancies. While both outcome expectancies and perceived self-efficacy play a role in behavior outcomes, it is important to differentiate between the two for clarity when investigating the impact of factors impacting perceived efficacy.

Perceived self-efficacy is predominately informed by four sources of information: enactive mastery experiences, vicarious experiences, verbal persuasion, and physiological states (Bandura, 1997). These sources of information become integrated into perceptions of self-efficacy through cognitive processing and self-reflection. Cognitive processing is a key factor in moving everyday experiences into one's sense of self and contributing to beliefs of efficacy.

Enactive mastery experiences include situations in which an individual takes action with an intended desired outcome. These experiences provide authentic evidence to the individual that they are capable of success. As a person takes action or performs a task, continuously observing cause and effect, success and failures, this information becomes one's efficacy beliefs. These beliefs are then accessed to help form perceptions of competence. Enactive mastery experiences are the most influential source of information for perceived self-efficacy (Bandura, 1997). Repeated successes lay a foundation for high perceived self-efficacy and the belief that setbacks and failures can be overcome. Upon repeated, successful, challenging mastery experiences supporting the development of one's self-efficacy, the ability to persevere in the face of obstacles increases. It is through cognitive processing of information related to capability from enactive mastery experiences that results in changes to self-efficacy (Bandura 1986, Bandura, 1997).

Vicarious experiences include those involving opportunities to assess one's abilities in relation to peers. Viewing these successful models, performed by people, similar to oneself provides an opportunity for comparison and can support the perspective that one is also capable of success (Bandura, 1997). Vicarious experiences have more influence on perceived self-efficacy the more closely an individual feels related to the person modeling the behavior. Similarity with the person modeling a behavior, specifically similarities in gender and age,

can inform the observer about behavioral appropriateness and aid in assessing one's own self-efficacy (Schunk & Usher, 2012). Schunk (1987) describes two types of models of vicarious experiences, mastery models and coping models. Observation of mastery models who perform successfully and without fault, may not serve as similar models for students who have experienced learning difficulties. Coping models in contrast, provide example of struggle and effort toward growth and learning, finally resulting in mastery performance. Some individuals may identify with the model that parallels their own struggles and these models become vicarious experiences that inform increased self-efficacy. Vicarious experiences may also include self-modeling in which an individual might observe themselves through recordings (Schunk & Usher, 2012). Vicarious experiences have less influence on perceived self-efficacy as the individual is not directly experiencing enacting a behavior however, vicarious experiences offer a path toward learning without potential risks that might be associated with enactive mastery learning (Schunk & Usher, 2012).

Verbal persuasion, or feedback and encouragement from another person held in high esteem or seen as an expert can also serve as information that increases a sense of efficacy by providing information about personal competency. Bandura (1997) posits, "it is easier to sustain a sense of self-efficacy, especially when struggling with difficulties, if significant others express faith in one's capabilities than if they convey doubts" (p. 101). Supportive verbal feedback affirming one's capabilities can bolster perceived beliefs in ability. The form of verbal persuasion can affect whether or not it becomes a source of self-efficacy. Positive evaluative feedback even without corresponding performance can enhance perceived self-efficacy. Schunk (1982, 1983) found that in children, evaluative feedback focusing on improvement through effort and personal capabilities had a positive impact on perceived self-efficacy. Moreover, feedback associated with developing competency had significant impact on perceived self-efficacy. Similarly, in a qualitative study of PSTs, Black (2015) found that, during a six-week practicum, PSTs' confidence levels varied with the affirmation or criticism of their supervising teacher. Furthermore, Black (2015) suggests that supervising teachers, through verbal persuasion, can potentially affect PST confidence and motivation.

The fourth source of information contributing to self-efficacy, posited by Bandura (1997), is physiological and affective states. The source of a physiological state, its intensity, and the circumstances impact the cognitive processing of feelings and emotions and in turn

influence one's perceived capability (Bandura, 1997). Physiological states refer to the emotional and physical states an individual experiences as they perform a task. These physiological states are interpreted by an individual in relation to their ability to perform the task. For example, when one feels anxiousness and extreme stress, these feelings may be interpreted as indicators of inability to perform a given task; "if I were capable, I would not feel nervous" therefore negatively impacting perceived self-efficacy.

An understanding of sources that inform self-efficacy provides a foundation for examining personal characteristics and experiential factors that may relate to enhancing one's perceptions of their efficacy in particular situations. Perceived self-efficacy, as a construct highly specified to context, has been described and measured within the teaching field in relation to student achievement, job satisfaction (Ashton, 1984; Bandura, 1997; Caprara et al, 2006; Guskey & Passaro, 1994; Klassen et al., 2011; Vieluf et al., 2013) and effectiveness of teaching within particular settings, subjects, and student populations.

Teacher Self-Efficacy

Grounded in Bandura's (1997) definition of perceived self-efficacy, "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3), Tschannen-Moran et al. (1998) define the construct of teacher efficacy as "the teacher's belief in her or his ability to organize and execute the courses of action required to successfully accomplish a specific teaching task in a particular context" (p. 233). A model developed by Tschannen-Moran et al. (1998) conceptualizes the cyclical characteristics of teacher efficacy and reflects evidence of both internal and external factors influencing teacher efficacy (Gusky & Passaro, 1994). Their model incorporates the sources of efficacy information which are subject to cognitive processing (interpretation, reflection, evaluation, etc.) with inputs of teaching task and personal teaching competence to develop one's beliefs about their teaching efficacy. Inclusion of teaching task and personal teaching competence makes explicit, the input of teaching context into teacher efficacy. Furthermore, the model represents the reciprocal relationship between teacher efficacy, teacher behaviors or characteristics, and performance. The resulting performance then becomes new input as a source of efficacy information. Holzberger et al. (2013) further substantiated the reciprocal nature of Tschannen-Moran et al.'s (1998) model with findings from a longitudinal study indicating that teacher efficacy changes over time and "increases in response to experiences

of success in the classroom” (p. 783). The teacher efficacy literature documents the relationships between teacher perceived efficacy, teacher behaviors, and performance.

Teachers’ perceived efficacy affects their interaction with students, approach to the educational process, and instruction. Ashton & Webb (1986), in a large, multi-year, mixed method study of middle and junior high school teachers, found that less efficacious teachers attributed student low-achievement to failings of the students. Indicating that the students’ problems were outside of the teacher’s control, noting lack of ability or motivation, “character deficiencies” and “poor home environments” (p. 68). As a result, teachers with low perceived self-efficacy tended to give less instructional time to low-achieving students due to beliefs about these students’ inability to learn. In contrast, the authors found that teachers with a high sense of teacher efficacy were more likely to view low-achieving students as teachable and worthy of attention and effort from the teacher. Ashton & Webb (1986) also reported that teachers with high perceived self-efficacy tended to have classrooms characterized by a more relaxed and friendly atmosphere. Moreover, the researchers observed fewer negative comments about students and fewer classroom management issues with students among more efficacious teachers, keeping students on task and actively engaged during tasks. Ashton & Webb’s (1986) research furthered the findings from Ashton (1984) that identified characteristics of middle-school teachers with high perceived self-efficacy: positive expectations for student behavior and achievement, personal responsibility for student learning, sense of control in relation to student learning, and student inclusion in goal setting and decision making.

When teachers have a high instructional efficacy, it can affect teaching behaviors and student outcomes. Research has demonstrated teacher self-efficacy is a predictor of teacher behaviors associated with student achievement including, teacher persistence in the face of challenge (Ashton & Webb, 1986; Bandura, 1997; Gibson & Dembo, 1984), use of effective teaching strategies (Gibson & Dembo, 1984), and maintenance of higher expectations (Ashton & Webb, 1986; Bandura, 1997; Ross, 1994). Moreover, these positive teaching behaviors can lead to increased student achievement. Caprara et al. (2006) found that teacher self-efficacy was a significant predictor of student achievement. The authors also reported that student achievement contributed to teacher perceived self-efficacy, indicating a possible reciprocal affect between teacher self-efficacy and student achievement. High levels of self-

efficacy have also been associated with commitment to the teaching profession and fostering collaboration with parents and other educators (Caprara et al., 2003; Caprara et al., 2006). Anderson et al. (1988) reported that teacher self-efficacy was positively related to student achievement for students in grades three and six. Additionally, teacher self-efficacy was also positively correlated to reading self-efficacy among younger elementary aged students.

As is indicated by the teacher efficacy process model (p. 228, Tschannen-Moran et al., 1998), teacher efficacy is influenced by teaching context (e.g., student populations, grade level, classroom environment) (Knoblauch & Woolfolk Hoy, 2008). Bandura (1997) notes that teachers' perceived instructional efficacy can vary across teaching contexts which should be considered when assessing teacher efficacy and interpreting measures of teacher efficacy. Teacher efficacy for teaching EMLs is one such context in which effective teaching requires specific pedagogical, linguistic, and sociocultural knowledge and skills. As student demographics begin to shift and more EMLs are enrolled in U.S. public schools, identifying specific challenges and factors influencing teacher efficacy related to instructing EMLs becomes imperative. Gandara et al. (2005) reported that teachers in California cited, ability to communicate with students and parents, linguistic knowledge and pedagogy, and a feeling of efficacy for teaching EMLs, as necessary skills for successfully teaching EMLs. O'Neal et al. (2018), found that, while teachers from a rural school with EMLs felt a responsibility to teach EMLs, only a quarter of these teachers felt prepared to teach EMLs. All teachers, including teachers of specific content areas, need to feel a sense of self-efficacy for teaching EMLs because all content is taught through language. As communicators, evaluators, and educators, language plays an essential role in teaching and learning (Fillmore & Snow, 2000). Luykx et al. (2008) found, teachers inadequately serve emergent multilingual learners when they assume content such as science should be taught independent of language. The authors noted that scientific concepts are not uniform across different languages and disregarding these language differences can make it difficult for EMLs to develop a conceptual understanding of the content. Furthermore, Luykx, et al. (2008) posited, for content teachers to address the pedagogical needs of EMLs, they must understand the communicative context of learning. The authors assert that meaningful scientific instruction for EMLs should include focus on the interaction of the academic content, student home

language, and the language of instruction (Luykx et al., 2008). Teacher perceived self-efficacy for teaching EMLs can impact learning across content areas.

Pre-service Teacher Self-efficacy

During teacher preparation, PSTs are exposed to coursework and field experiences that support development of pedagogical knowledge and praxis. Coursework and field experiences can provide opportunities for efficacy development among PSTs through exposure to enactive mastery experiences, vicarious experiences, and positive constructive feedback from teacher mentors and teacher educators. While PSTs receive specific training targeted to the student populations they plan to teach (e.g., elementary or secondary students) and different content areas, they do not necessarily take specific coursework focused on EMLs or have field experience teaching EMLs unless seeking endorsement in English as a new language (ENL) or certification in bilingual education. Out of 51 states studied, Gras & Kitson (2021) identified 49 states that that permitted teachers to “add-on” an endorsement for teaching EMLs by taking anywhere between 9-34 credit hours (depending on the state). However, it is difficult to ascertain how many states require all teachers to take these endorsement courses. Menken and Antunez (2001) noted that 41% of 417 institutions of higher education, in a survey by the American Association of Colleges for Teacher Education, reported the requirement of courses with a focus on EMLs. However, they also note that they believe only a small number of these school required content area teachers to take these courses. It is not clear how many content area teachers are currently required to take courses focused on teaching EMLs across the United States as part of their teacher preparation.

Teacher preparation and field experience can potentially play important roles in development of PST perceived self-efficacy for instructing EMLs. Menken & Antunez (2001) analyzed relationships between curricular methods focused on EMLs in a teacher preparation programs and PST self-efficacy. Interactive and collaborative aspects of the teacher preparation program (e.g., instructional strategies, group activities, and peer and instructor interaction) were most strongly related to PST self-efficacy, providing further support of the relationship between Bandura’s (1997) sources of self-efficacy and perceived teacher efficacy.

The PST self-efficacy literature generally describes PSTs as having low self-efficacy for teaching EMLs, attributing this to a lack of experience with diverse populations and knowledge to instruct and assess EMLs (Durgunoğlu & Hughes 2010; Pappamihel, 2007; Tellez & Waxman, 2006; Turgut et al., 2016; Zeichner, 2003). In a mixed methods study, Durgunoğlu & Hughes (2010), examined PST knowledge, attitudes and beliefs about EMLs, during their student teaching. Their findings indicated a strong correlation between perceived preparedness and self-efficacy. The authors noted low PST perceived preparedness, self-efficacy, and pedagogical knowledge for teaching EMLs, indicating that PSTs did not feel prepared for instructing EMLs. Furthermore, classroom observations revealed that PSTs who felt unprepared for instructing EMLs avoided interacting with these students, demonstrating the impact of low perceived self-efficacy and preparedness on direct interactions with EMLs.

In addition to lack of preparedness, beliefs and attitudes formed from misconceptions and misunderstandings related to language acquisition, the role of EML first language in learning English, and cognitive ability can challenge PST sense of self-efficacy for teaching EMLs. Webster & Valeo (2011), found that some PSTs held inaccurate beliefs about how EMLs learn English, explaining that exposure to English would suffice for an EML to become English proficient. These beliefs contradict research that shows explicit language instruction, interaction, and feedback, in addition to language exposure are integral to English learning for EMLs. In a qualitative study of white and Hispanic PST tutors, Marx (2000) found that the white, monolingual PSTs who had never resided outside the United States, had difficulty differentiating EML language skills from academic ability and held expectations that the EMLs they tutored would drop out of school. Marx (2000) posits that these PST beliefs about culture and language, in addition to their misconceptions about second language acquisition and content learning can hinder their ability to support and scaffold learning for EMLs. Pappamihel (2007) furthered the research of Marx (2000) with a qualitative study of 130 PSTs from a Florida university that examined PST reflective journals maintained during an EML tutoring project. Analysis of the journals revealed some PST held deficit views of EMLs, believed EMLs were a burden on teachers, and held misconceptions about language acquisition. However, Pappamihel (2007) discovered that over time and experience with their EML tutees, PSTs who had held misconceptions had changed their views or acknowledged different perspectives by the end of the tutoring project; noting that

participants moved from feelings of apprehension to confidence in regard to teaching EMLs. Moreover, the potential to change PST misconceptions about EMLs may reside in the ability to foster increased self-efficacy through exposure to sources of information that inform self-efficacy.

The sources of information for self-efficacy (mastery experiences, vicarious experiences, verbal persuasion, and physiological states) require cognitive processing to create meaning which then may contribute to perceived self-efficacy. PSTs are exposed to pedagogical content through coursework, internships, practicums, and student teaching as they learn and prepare to become teachers. During teacher preparation, PSTs also need the opportunity to engage in cognitive processing of their efficacy building experiences. Black (2015) examined 22 PST lesson reflections and summative reflections made during a six-week practicum. Critical reflection on lessons and experiences indicated cognitive processing of PST experiences with teaching and student engagement (enactive mastery experiences) and feedback from teacher mentors (verbal persuasion). The process of reflection gave PSTs the opportunity to make meaning of their experiences and integrate this meaning into their perceptions of teaching self-efficacy. In addition to experiences teaching and interacting with EMLs, PSTs need guidance to critically and deeply reflect on these experiences to increase self-efficacy for teaching EMLs (Black, 2015; Yost, 2006).

Teaching Emergent Multilingual Learners

To support literacy development for EMLs, teachers need to have a foundation in second language development, an understanding of the connection between home language and language of instruction. In addition, teaching EMLs requires knowledge and skills for integrating language and culture effectively in the classroom (de Jong & Harper, 2005; Fillmore & Snow, 2000). Teacher attitudes, behaviors, feelings of preparedness, and self-efficacy impact EMLs' literacy development, academic achievement, and self-efficacy (Byrnes, 1997; Mojavezi & Tamiz, 2012; Woolfolk Hoy & Davis, 2006). Byrnes et al. (1997) in a study of teacher language attitudes among 191 teachers from three states, found that teachers with formal training for teaching English as a second language had more positive language attitudes, suggesting that building language acquisition knowledge and skills helps teachers work more effectively with EMLs. Specific knowledge and skills needed by teachers of EMLs include understanding the process of second language acquisition and

recognizing that language and culture are the medium of teaching and learning. Moreover, the teacher's ability to identify language demands for academic content areas helps EMLs navigate both the academic language and new content (de Jong & Harper, 2005).

Whether in specialized language support classrooms, general education, or content area classrooms, EMLs need language support to access academic content (Lucas & Grinberg, 2008). In their explanation of why teachers need to understand more about language, Fillmore and Snow (2000) assert, teachers should be prepared to assume the roles of communicator, educator, evaluator, and agent of socialization. Knowledge of the process of second language acquisition can help teachers communicate more effectively with their EMLs (Coady et al., 2011). Teachers support language development across content and curriculum through identification and selection of appropriate instructional materials, requiring them to know how language works. In the role of evaluator of students, teachers need to understand language in relation to assessing learning ability, as language proficiency can confound assessment of content knowledge. Finally, teacher awareness and understanding of the relationship between the language of instruction and its use in socialization into the school culture can help illustrate to students, that their home language and culture are valued within the classroom and school (Coady et al., 2011).

A major challenge faced by content area teachers and mainstream teachers with EMLs in their classrooms is teaching both content and English language to students who are new to English (Lucas & Grinberg, 2008). The National Center for Education Statistics (2022) reported that 67% of teachers taught EMLs, however, only 47.9% had ever taken a course focused on EMLs in their teacher preparation. Additionally, teacher-parent communication, lack of time to address English language and content learning needs, access to teaching strategies and assessment tools, lack of knowledge about language, and misconceptions about second language acquisition make it challenging for teachers to best serve EMLs (Coady et al., 2011; Gandara et al., 2005; Karabenick & Noda, 2004; Walker et al, 2004). Karabenick and Noda's (2004) survey of 729 teachers of which, 88% taught EMLs, examined teacher attitudes, beliefs, and efficacy related to second language acquisition and teaching EMLs. Their findings suggested teachers felt less efficacious about teaching EMLs than students in general, although teachers with professional development training focused on teaching EMLs did feel more prepared. Furthermore, Karabenick and

Noda (2004) identified a lack of understanding of the role of second language acquisition (specifically the relationship between first and second languages) in content learning. Similarly, in a survey of California teachers, Gandara et al. (2005) noted that teachers with more preparation (in-service and pre-service) felt significantly more efficacious in pedagogy, English language development, and teaching reading and writing when teaching EMLs compared to those without specialized professional development. These studies illustrate both a need for specific training in pedagogical content and linguistics for teachers of EMLs and an opportunity to provide EMLs with accessible instruction to optimize their learning (Lucas & Grinberg, 2008). Lucas & Grinberg (2008) further assert that many challenges teachers face when teaching EMLs can be addressed by professional development and teacher preparation. Fostering feelings of preparedness for teaching EMLs through training in linguistics that support understanding of language and cultural diversity (Fillmore & Snow, 2000) can support EMLs as they work toward acquiring English. Training related to academic language, its use across content areas, and how it contrasts with informal communication, helps teachers support EMLs to access academic content (National Council of Teachers of English, 2008) and can enhance teacher self-efficacy for teaching EMLs (Gandara et al., 2005).

Teacher self-efficacy for teaching EMLs plays a key role in effectively teaching EMLs, as it mediates teacher behaviors that, combined with training and experiences can contribute to student achievement, self-efficacy, and motivation (Anderson et al., 1988; Mojavezi & Tamiz 2012). There is limited research on the impact of teacher self-efficacy on EML self-efficacy, however, research with non-EMLs and research on characteristics associated with high teacher self-efficacy provide some insight into the relationship between EML and teacher self-efficacy. Anderson et al. (1988) studied teacher and student self-efficacy and student achievement among third and sixth grade teachers and students. They reported significant relationships between teacher self-efficacy and student language and math achievement. Anderson et al. (1988) also noted a significant correlation between teacher self-efficacy and third grade student self-efficacy. In a study of high school students and teachers, Mojavezi & Tamiz (2012) found significant relationships between teacher self-efficacy and overall student motivation and achievement. These findings, although not

specific to EMLs and teachers of EMLs, indicate the significant relationship and impact that efficacious teachers can potentially have on EML achievement, self-efficacy, and motivation.

Although not a direct measure of self-efficacy, research on perceived teacher caring in relation to EML self-efficacy and achievement has yielded interesting and relevant findings. Lewis et al. (2012) examined perceived teacher caring, math self-efficacy, and math achievement among Hispanic EML and non-EML upper elementary students in California. They reported that perceptions of teacher caring had the largest impact on math self-efficacy for EMLs (as opposed to non-EMLs). EML math self-efficacy then supported increased math achievement. Lewis et al. (2012) posit that EMLs who perceive their teachers as caring feel that their teachers “(1) take personal interest in students as individuals, (2) are empathetic toward students’ feelings, and (3) are intent on listening to what students have to say” (p. 23). Moreover, they conclude that teachers with these characteristics can have significant influence on both EML academic self-efficacy and outcomes. The research by Lewis et al. (2012) indicates a significant relationship between the characteristics of efficacious teachers (e.g., caring, empathetic, taking personal interest in students) (Bandura, 1997), positive academic outcome, and increased self-efficacy for EMLs.

Measuring Teacher Self-Efficacy

Measurement of self-efficacy has taken many forms over the years. Researchers have approached the construct through different theoretical lenses and a variety of survey question and response formats (Tschannen-Moran & Woolfolk Hoy, 2001). In a review of the history of teacher self-efficacy instruments, Tschannen-Moran and Woolfolk Hoy (2001) describe the development and use of instruments to measure teacher self-efficacy and note the extent of their use in research. Researchers at the RAND organization (Armor et al., 1976) were among the first to attempt to measure teacher self-efficacy using two questions related to locus of control and the extent to which a teacher felt he or she could control student motivation and performance (Tschannen-Moran & Woolfolk Hoy, 2001). The later developed and widely utilized teacher efficacy scale (TES) was developed by Gibson and Dembo (1984). Grounded in Bandura’s (1986, 1997) construct of self-efficacy within social cognitive theory measured two factors reflecting self-efficacy and outcome expectancy with a 30 item scale. In an attempt to address context specificity in the measurement of teacher self-efficacy, Tschannen-Moran and Woolfolk Hoy (2001) cite instruments developed to

measure science teaching efficacy, classroom management, and special education. In addition to these instruments, Tschannen-Moran and Woolfolk Hoy (2001) present the development of their own teacher self-efficacy instrument, the Ohio State teacher efficacy scale (OSTES) including short (12 items) and long (24 items) versions. The OSTES, also grounded in social cognitive theory, is purported to be useful across contexts and valid for use with teachers and PSTs. In addition to the teacher self-efficacy instruments presented and reviewed by Tschannen-Moran and Woolfolk Hoy (2001), there are a limited number of measurement tools that have been developed to measure teacher and PST self-efficacy for teaching EMLs.

Three instruments specifically designed to assess teacher self-efficacy for teaching culturally and linguistically diverse students have been validated and include measures that address some or all of the essential skills and knowledge for teaching EMLs (de Jong & Harper, 2005; Fillmore & Snow, 2000). The Culturally Responsive Teaching Self-efficacy scale (CRTSE) (Siwatu, 2007), the Teaching English Language Learners Scale (TELLS) (Carney, 2012), and the ELL Education Self-efficacy Scale (Fu & Wang, 2021) were developed specifically to address teacher and PST perceived competence for attending to learning needs among culturally and linguistically diverse students. It is important to understand the components of each scale to determine the usefulness and validity for measurement of PST self-efficacy for teaching EMLs.

The CRTSE scale, grounded in Bandura's (1997) definition of teacher self-efficacy within the framework of social cognitive theory and culturally responsive teaching competencies, includes the components: curriculum and instruction, classroom management, student assessment, and cultural enrichment (p. 1089, Siwatu, 2007). Factor analysis of the scale items yielded a one-factor solution, accounting for 46% of the variance in responses and high internal reliability. The scale includes 40 items, most of which relate to culturally responsive competencies within the general population of students. However, four items include specific reference to "English Language Learners" and of these, two (both related to teacher use of EML home language) had the lowest factor loading of all items (Siwatu, 2007). The CRTSE scale items lack specificity for teaching EMLs, limiting its usefulness for assessing teacher and PST efficacy for teaching EMLs.

The TELLS (Carney, 2012) is a 23 item scale measuring instruction and assessment, and native language support and resources, within the construct of self-efficacy. The scale response format is a 0-10 Likert scale representing “certain cannot do at all” to “certain can do.” The items in the TELLS use specific language referring to “ELL students” ensuring that respondents are continuously focused on the context of teaching EMLs. Moreover, the items include statements specific to pedagogical skills and sociocultural knowledge important to teaching EMLs (de Jong & Harper, 2005; Fillmore & Snow, 2000). After initial development of the instrument, subsequent factor analysis failed to result in support for the two factors, instruction and assessment, and native language support and resources (Carney, 2012), resulting in questionable validity of this scale as a two dimensional measure of teacher self-efficacy for teaching EMLs.

The ELL Education Self-efficacy Scale (Fu & Wang, 2021) is a 46 item scale with a three factor model including pedagogical content self-efficacy, linguistic self-efficacy, and sociocultural self-efficacy. All items include language that specifies teaching competence with EMLs. The three factor model accounted for 67.78% of the variance in scale responses and each factor had high internal reliability as measured by Cronbach’s alpha (Fu & Wang, 2021). Comparison of the three instruments for measuring PST self-efficacy for teaching EMLs identifies important differences. Only the ELL Education Self-efficacy Scale (Fu & Wang, 2021) includes items specifically related to competence for providing linguistic instruction to EMLs, identified as a key component of effective EML instruction (Coady, 2011; Lucas & Grinberg, 2008).

Teacher and PST self-efficacy is sensitive to context and as the number of EMLs in U.S. classrooms continues to increase, assessing PST self-efficacy with context-specific instruments is vital to understanding needs and opportunities to support PSTs in preparing them to teach EMLs. In a study exploring teacher preparation of teachers of EMLs and bilingual educators, Menken & Antunez, (2001) identified three key areas of competency that teachers need training in when teaching EMLs: “knowledge of pedagogy, knowledge of linguistics, and knowledge of cultural and linguistic diversity”.

Personal Background and Educational Experience

Personal Background

Teacher beliefs and attitudes mediate the relationship between teacher and student (Rizzuto, 2017). Teacher personal background has been associated with teacher attitudes and beliefs about EMLs. Furthermore, teacher attitudes toward EMLs influence pedagogical practice with EMLs (Rizzuto, 2017; Clair, 1995). Teacher experience with culturally and linguistically diverse students, living and working outside the United States and proficiency in or study of additional languages have been strongly correlated to positive teacher and PST attitudes toward working with EMLs (Marx & Pray, 2011; Medina et al., 2015; Youngs & Youngs, 2001). Engaging with people who speak non-English languages and studying a foreign language provide insight into language learning for teachers and positively affect teacher attitudes and beliefs toward EMLs. Youngs & Youngs (2001) surveyed 173 mainstream middle school and junior high school teachers to examine teacher attitudes toward working with EMLs in relation to teacher educational background, experience with diverse cultures, experience with EMLs, and demographic characteristics. Although their survey questions lacked specificity, their general findings reflected positive relationships between mainstream teacher attitudes towards EMLs and teachers with experience living and working outside the United States.

Medina et al. (2015) investigated the impact of a study abroad program on PSTs' self-efficacy related to teaching EMLs, understanding of second language acquisition, and beliefs about language and intelligence. While the researchers did not conduct inferential statistical analyses with these data, the findings are illustrative of areas that warrant further study. The authors found that PSTs had increased self-efficacy for teaching EMLs, greater empathy, and reported better understanding of second language acquisition (Medina et al., 2015). Living, working, or studying outside of the United States provides teachers and PSTs opportunity to develop an understanding of and potentially develop empathy for the experiences of their EMLs. Furthermore, this shift in attitudes and beliefs may influence perceptions of self-efficacy for teaching EMLs.

In research conducted using seven years of data from Miami-Dade County Public Schools, Loeb, et al. (2014) examined predictive ability of teacher fluency in a student's home language on student math and reading achievement. The researchers found that a

teacher's ability to speak a student's home language was predictive of teacher effectiveness in teaching EMLs. While not examined in this research, teacher effectiveness in teaching EMLs may imply successful outcomes for EMLs and potentially a relationship between teachers' ability to speak another, non-English language and their self-efficacy for teaching EMLs.

Research with in-service teachers also reveals associations between teachers who speak languages other than English and perceived preparedness for teaching EMLs (Luykx et al., 2008; Coady et al., 2011). Luykx et al. (2008) posit that teachers who speak or have studied more than one language have a metalinguistic awareness that can provide insight into challenges faced by EMLs. Additionally, Coady et al. (2011) reported significantly higher levels of perceived preparation for teaching EMLs among in-service teachers who speak a language other than English at an intermediate or higher level of proficiency. In a case study of two English speakers of other languages (ESOL) teachers, Reeves (2009) examined teachers' experiences learning English as their first language and learning additional languages in relation to their linguistic knowledge. The author noted that limited experience with an additional language impacted linguistic knowledge due to a lack of ability to predict difficulties with language and to understand language learning processes (Reeves, 2009). Teachers who speak English in addition to other languages have a primary source of linguistic knowledge (their own) with experience and insight into ways of presenting language to learners, the complexities of learning another language, and how to employ connections between other languages and English for learning (Coady et al., 2011; Reeves, 2009; Gandara & Maxwell-Jolly, 2006). Reeves (2009) further asserts that teacher preparation programs should consider teachers' personal backgrounds as language learners to create learning experiences that take into account PST assets and limitations. Examination of PST self-efficacy for teaching EMLs in relation to their linguistic and cultural backgrounds could potentially inform teacher preparation programs in meeting linguistic knowledge needs of their students. Studying an additional language and contact with people who speak non-English languages are experiences that teachers can use to foster connections with EMLs (Lucas & Grinberg, 2008) through increased insight into the language learning process and experiences of their EMLs.

Educational Experiences

Teacher and PST educational experiences have been correlated with teacher attitudes toward EMLs and self-efficacy for working with EMLs. The literature on teaching EMLs identifies formal training, multicultural education, and educational experiences with EMLs as factors positively impacting teacher attitudes (Byrnes et al., 1997; Youngs & Youngs, 2001). Furthermore, field experiences with EMLs have been associated with teacher perceived self-efficacy for instructing EMLs (Coady et al., 2011; Jimenez-Silva et al., 2012).

Coady et al. (2011) surveyed in-service teachers who graduated from a five-year elementary education/ESOL teacher education program. They found that the recent graduates perceived field experiences that directly involved observation in English as a second language classrooms or direct contact with EMLs as most valuable in preparing them to teach EMLs. These findings indicate that enactive mastery experiences and vicarious experiences with EMLs increased teachers' perceived preparation. In research by Jimenez-Silva et al. (2012) PSTs were provided intentionally designed instructional activities to foster engagement and interaction during an endorsement training for teaching EMLs. After these educational experiences, PSTs reported engagement and collaboration with course content increased confidence for teaching EMLs. Similarly, Yough (2019) developed a course-based intervention to help PSTs better understand the perspective of EMLs and to promote their self-efficacy for teaching EMLs. PSTs who received the intervention had significantly higher self-efficacy for teaching EMLs than those without the intervention. Yough's (2019) research indicates that even brief course-based educational experiences can influence PST self-efficacy for teaching EMLs. In other research with direct interaction between PSTs and EMLs, Mahalingappa et al. (2018) reported positive effects on PST self-efficacy after participating in an E-PenPal intervention with EMLs. The tutoring experiences with EMLs, through electronic interactions, and feedback from teacher educators provided mastery experiences and verbal persuasion (Bandura, 1997) for PSTs. Moreover, these experiences within a course setting where reflection and critical thinking about the experiences can be guided and promoted, resulted in significant increases in self-efficacy.

Introduction to the Current Study

The current study adapted Fu and Wang's (2021) ELL Education Self-Efficacy Scale to examine PST self-efficacy for teaching EMLs. The ELL Education Self-Efficacy Scale

measures self-efficacy on three domains, pedagogical content, linguistic teaching, and sociocultural teaching. The scale incorporates key areas pertinent to teaching EMLs identified in the literature (Coady et al., 2011; de Jong & Harper, 2005; Fillmore & Snow, 2000; Lucas & Grinberg, 2008). Items in the pedagogical content domain of the scale address PST competence in use of instructional strategies such as establishing clear objectives and providing challenging curriculum for EMLs (de Jong & Harper, 2005; Fillmore & Snow, 2000). The linguistic domain includes items that assess PST self-efficacy for linguistic instruction to EMLs (Coady et al., 2011; Lucas & Grinberg, 2008). The items in the sociocultural domain address PST perceived sense of competence for incorporating knowledge of cultural diversity in their classrooms and into their interactions with EMLs and their parents (Siwatu, 2007). The adaptation of Fu & Wang's (2021) scale addresses a gap in the measurement of PST self-efficacy for teaching EMLs through its inclusion of linguistic self-efficacy items and item specificity for teaching EMLs. Additionally, the current study addresses the call for investigation of context specific self-efficacy sources of information (Klassen et al., 2011) by examining the influence of PST personal background and educational experience on self-efficacy for teaching EMLs.

Chapter 3: Methodology

This quantitative study employed a survey research design using nonprobability sampling to examine PST self-efficacy for teaching EMLs. The construct of self-efficacy for teaching EMLs, conceptualized as pedagogical content, linguistic, and sociocultural domains was measured with the *ELL Education Self-Efficacy Scale* (Fu & Wang, 2021) in an online self-administered survey. Descriptive and multivariate analyses were conducted to describe and evaluate the mean differences in PST self-efficacy by personal background and educational experience.

Research Hypotheses

This study sought to answer three research questions:

- 1) Are there significant differences in levels of PST self-efficacy for teaching EMLs based on PST educational experience?
- 2) Are there significant differences in levels of PST self-efficacy for teaching EMLs based on personal background?
- 3) Is there a significant difference in PST self-efficacy for teaching EMLs based on an interaction between educational experience and personal background?

The following research hypotheses were developed in response to the three research questions.

Main Effect 1:

H_{01} : There is no statistically significant differences between PSTs who had educational experience with EMLs (EDEX) and PSTs without educational experience with EMLs (NoEDEX) with regard to their overall self-efficacy (pedagogical content domain, linguistic domain, and sociocultural domain) for teaching EMLs.

$$\mu_{EDEX} = \mu_{NoEDEX}$$

H_{a1} : There are statistically significant differences between PSTs who had educational experience with EMLs (EDEX) and PSTs without educational experience with EMLs (NoEDEX) with regard to their overall self-efficacy (pedagogical content domain, linguistic domain, and sociocultural domain) for teaching EMLs.

$$\mu_{EDEX} \neq \mu_{NoEDEX}$$

Main Effect 2:

H₀₂: There are no statistically significant differences between PSTs with a personal background other than English (OTHENG) and PSTs with a personal background English only (ENGONLY) with regard to their overall self-efficacy (pedagogical content domain, linguistic domain, and sociocultural domain) for teaching EMLs.

$$\mu_{OTHENG} = \mu_{ENGONLY}$$

H_{a2}: There are statistically significant differences between PSTs with a personal background other than English (OTHENG) and PSTs with a personal background English only (ENGONLY) with regard to their overall self-efficacy (pedagogical content domain, linguistic domain, and sociocultural domain) for teaching EMLs.

$$\mu_{OTHENG} \neq \mu_{ENGONLY}$$

Interaction Effect:

H₀₃: There is no statistically significant educational experience by personal background interaction effect on PSTs' overall self-efficacy (pedagogical content domain, linguistic domain, and sociocultural domain) for teaching EMLs.

$$\mu_{EDEXOTHENG} = \mu_{EDEXENGONLY} = \mu_{NoEDEXOTHENG} = \mu_{NoEDEXENGONLY}$$

H_{a3}: There is a statistically significant educational experience by personal background interaction effect on PSTs' overall self-efficacy (pedagogical content domain, linguistic domain, and sociocultural domain) for teaching EMLs.

$$\mu_{EDEXOTHENG} \neq \mu_{EDEXENGONLY} \neq \mu_{NoEDEXOTHENG} \neq \mu_{NoEDEXENGONLY} ; \text{ for at least two groups}$$

For this study, alpha was set at .05 ($\alpha = .05$). Therefore, the null hypotheses will be rejected only if $p \leq .05$.

Dependent Variables

The composite measure of PST self-efficacy for teaching EMLs had three levels, referred to as domains in this study: pedagogical content, linguistic, and sociocultural. Self-efficacy was measured using the *ELL Education Self-Efficacy Scale* (Fu & Wang, 2021) in which each domain is a subscale with eighteen, eleven, and sixteen items, respectively. Each domain of self-efficacy was treated as a dependent variable and taken together to represent the composite self-efficacy measure. Within each domain, PSTs were asked to indicate how competent they feel on a scale of 0-100 in response to statements (see Appendix A), an interval level of measurement.

Scale items in the pedagogical content domain included statements related to general instruction of EMLs. Item topics included:

1. assessment (e.g., “I can use a variety of assessments to track ELL students’ academic achievement in content areas.”),
2. teaching strategies (e.g., “I can help ELL students practice the classroom routines through modeling”), and
3. curriculum (e.g., “I can develop higher order thinking skills in my ELL students through teaching the curriculum”).

The linguistic domain scale items centered on PST feelings of competence for providing linguistic instruction to EMLs. These items covered specific linguistic topics:

1. language irregularities (e.g., “I can motivate English language learning (ELL) students to pay attention to language irregularities that may confuse them”);
2. knowledge of second language acquisition (e.g., “I can distinguish between ELL students’ academic language proficiency and social/ conversational language proficiency”)
3. teaching academic vocabulary (e.g., “I can teach academic terminologies that are challenging to ELL students”)
4. text structure (e.g., “I can explicitly teach text structures to ELL students, such as differences in narratives and expository texts”), and
5. discourse patterns (e.g., “I can address the discourse patterns and rhetorical devices pertinent to academic tasks”).

The scale items included in the sociocultural domain focused on PST feelings of competence for addressing sociocultural issues when instructing EMLs. These sixteen items covered specific topics of:

1. empathy and understanding (e.g., I can understand the challenges and anxieties that ELL students may undergo in adapting to a different culture”)
2. providing opportunities (e.g., “I can I can spend time on helping ELL students develop a sense of belonging to the learning community”)
3. collaboration (e.g., “I can maintain frequent communications with ELL students’ parents”), and

4. cultural connections (e.g., “I can build connections between ELL students’ cultural background and their classroom learning experiences”).

Independent Variables

The independent variables, educational experience and personal background, were derived from survey questions that were independent of the scale for measuring PST self-efficacy. The variable, educational experience, was ascertained from the question, “have you participated in any practicum experiences that included students who were English language learners?” It is a dichotomous categorical variable with responses grouped as “yes” or “no.” The second independent variable, personal background, also a dichotomous categorical variable, was defined as “other than English” personal background and “English only” personal background. This variable was comprised of a combination of responses to two questions: “are you proficient in any language other than English? (able to use the language fluently and accurately in social situations)” and “have you ever lived, worked, or studied in a non-English environment?” “Other than English” personal background included PSTs who were proficient in a language other than English and/ or have lived, worked, or studied in a non-English environment. These PSTs may have one or both characteristics. The other group, “English only” personal background, includes PSTs who reported being monolingual English and never having lived, worked, or studied in a non-English environment. Only PSTs with both characteristics were assigned to the “English only” personal background group.

Sampling Methodology

This study examined PST self-efficacy for teaching EMLs across the United States. PST participants were students 18 years and older enrolled in a teacher preparation program at the time of survey response (January and February of 2023). The quantitative research design of this study would optimally include probability sampling techniques to enhance external validity and allow for generalizations between the sample and the total population of PSTs. Probability sampling techniques necessitate the availability of a sampling frame from which a randomly selected sample could be drawn. Benefits of probability sampling include elimination of researcher bias in sample selection, and it results in a statistical model of the study population from which a researcher can estimate characteristics of the target population, increasing accuracy and credibility (Best & Harrison, 2009; Henry, 2009). However, when probability sampling is not an option, non-probability sampling can be used

to collect data about experiences of some of the members of the target population (Henry, 2009). Although nonprobability sampling can pose a threat to generalizability (Sue & Ritter, 2012; Hill, 1998), the sample can still provide data relevant to the research question for those included in the sample. In the current study, a sampling frame of all U.S. PSTs in teacher preparation programs was not available. Contacting individual teacher preparation programs at all universities across the United States was untenable given the limited timeframe and resources of this study. Additionally, while disclosure of contact information for all students enrolled in each teacher preparation program may potentially be permitted under the Federal Educational Rights and Privacy Act (FERPA), the wait time for student consideration of refusal to disclose and the resources required to contact all teacher preparation programs across the United States was prohibitive. Therefore, although this was a quantitative study, a random sample was not attainable and nonprobability sampling was instead employed to recruit PST participants.

Nonprobability sampling can be used to gain evidence about individuals with experiences relevant to research questions in which data collection would be difficult to collect or too costly (Bernard, 2000; Henry, 2009). Nonprobability sampling techniques that could potentially serve the purposes of this research study included convenience sampling and snowball sampling. Convenience sampling involves inclusion of participants most readily available to the researcher, and it is not known to what extent the participants represent the target population. The reasons for not selecting this sampling technique were two-fold; some of the PSTs in the local (convenient) teacher preparation program had participated in a pilot study of the same survey; and the local PST population was found to be homogeneous with regard to personal background. This study sought a more diverse PST population to improve the distribution of participants across the two independent variables. The snowball sampling technique is often used to access populations that are difficult to identify and locate, particularly when time and resources are limited (Henry, 2009). Snowball sampling was ultimately selected as the sampling method used to recruit PSTs to the study. This technique generally involves identifying and recruiting one person from the target population who then provides connection to other potential participants, and then these participants identify additional participants, and so on. For this study, the lack of a nationwide list of PSTs enrolled in teacher preparation programs was an obstacle to

recruiting participants. Snowball sampling was the most appropriate sampling method for recruiting a national sample of U.S. PSTs because of the lack of a sampling frame of PSTs and time constraints on the data collection schedule. The snowball sampling technique was modified and rather than participants connecting the researcher to additional participants, teacher educators and professional organization networks were employed to identify participants. Furthermore, these same teacher educators were asked to distribute the online survey link to their students and other faculty who would distribute the survey to their students.

The nonprobability sampling method used in this study creates challenges for defining the sample size using formulas reserved for probability samples that rely on calculations of standard error (Bernard, 2000; Best & Harrison, 2009; Henry, 2009; Hill, 1998; Sue & Ritter, 2012). Hill (1998) suggests setting a sample size target between 30 and 500, specifically 10% of the population of interest and ten times the number of variables being studied. Approximately 560,000 PSTs were enrolled in U.S. teacher preparation programs in the 2018-2019 (American Association of Colleges for Teacher Education, 2022). Available resources prohibited sampling 10% of all enrolled PSTs. Alternatively, Abu-Bader (2016) recommends a minimum sample size greater than the product of the groups of the independent variables, and each cell should have more cases than the number of dependent variables. The study design included two independent variables, each with two groups and three dependent variables ($2 \times 2 \times 4$) indicating a minimum sample size of 16. The current study recruited 66 participants of which 51 surveys were complete and included in the analysis.

Survey Design

A survey research design was implemented to address the research questions:

- 1) Are there significant differences in levels of PST self-efficacy for teaching EMLs based on PST educational experience?
- 2) Are there significant differences in levels of PST self-efficacy for teaching EMLs based on personal background?
- 3) Is there a significant difference in PST self-efficacy for teaching EMLs based on an interaction between educational experience and personal background?

The Pre-service Teacher Self-Efficacy for Teaching English Language Learners survey was developed in the University of Idaho Qualtrics platform to capture demographic data, personal background, educational experience, and self-efficacy from PSTs. Participants accessed the survey online through either a QR code or an online link to the University of Idaho Qualtrics platform and self-administered the survey. The survey was formatted for use on a computer, phone, or tablet. A survey administered online provides flexibility in reaching geographically dispersed participants and the ability to complete the survey on a variety of devices (tablets, computers, and phones). The targeted participants were PSTs enrolled in a teacher preparation program, and most have access to smart phones and computers (Pew Research Center, 2021; Schaeffer, 2019). Additionally, use of technology is common at most universities, and therefore, PSTs were assumed to be familiar with a survey presented on an online platform. Self-administration of the survey gave PSTs the flexibility to complete the survey at the time and location of their choice. Survey deployment was initiated at the start of a new semester to increase likelihood of faculty sharing the survey with their students and to provide time in a group setting to participate in the survey as a means of increasing the response rate (Fowler, 2009). Additionally, the survey completion time was kept under 20 minutes to encourage completion and engagement with the survey (Sue & Ritter, 2012). Other survey formats (e.g., paper, phone) were not selected because of their reliance on survey administrators, cost, and lack of flexibility in time and location for completing a survey (Fowler, 2009). Paper surveys would have had to be returned by mail to the researcher which was cost and time prohibitive. Phone surveys would require personnel to administer and record survey responses. Neither paper nor phone surveys presented the ease of access and administration afforded by an online, self-administered survey.

In addition to ease of accessing the survey, online, self-administration of the survey also has drawbacks, most notably, a lower response rate. As Fowler (2009) notes, surveys administered in a group setting have higher response rates than mail-in surveys. Although group administration of the survey was not part of the survey design, participants could potentially have been provided access to the survey in a class setting and been given time to complete the survey within that group setting. Repeated contact regarding the deployed survey such as follow-up emails, are another method for increasing response rates (Sue & Ritter, 2012; Fowler, 2009). However, because the methodology used in this study did not

send the survey directly to the target population but rather intermediaries, teacher educators or teacher professional organizations, follow-up emails were not deployed.

Non-response Bias

The PSTs who completed this self-administered online survey self-selected participation in the survey and may be systematically different from the larger population of PSTs (Fowler, 2009). The lack of a sampling frame poses an obstacle to analysis of PSTs who were not responsive to the survey. Furthermore, because of the modified snowball sampling technique, it is impossible to know who received the survey and opted to not respond. While the sampling method and survey design restrict the generalizability of the study, it does not limit the findings in regard to those that completed the survey.

Survey Instrument

Format Design

Design characteristics of the survey instrument supported engagement and completion of the survey. The survey questions and scale items were organized into content groupings, with each grouping on its own page to decrease completion time and non-response (Couper et al., 2001). The consent form was incorporated as the first page of the survey, therefore, upon giving consent, participants were directed to the first survey question. There was no requirement to complete survey questions, apart from giving consent to participate. Rather, response choices for opting out of responding with “I prefer not to respond,” “I don’t know,” and “other” were provided to encourage participants not to skip questions (Best & Harrison, 2009). Each of the three domains of the *ELL Education Self-Efficacy Scale* (Fu & Wang, 2021) appeared on separate pages and had their own set of short but clear instructions for responding to the items in that domain, including instructions for using the slider to indicate a response of 0-100 (Best & Harrison, 2009). The response format of 0-100 was found to be “psychometrically stronger” (p. 219, Pajares et al., 2001) than a Likert scale providing more discrimination between responses.

Survey Questions

The *Pre-Service Teacher Self-Efficacy for Teaching English Language Learners* survey included four sections: demographic information, personal background information, educational experience, and items from the *ELL Education Self-Efficacy Scale* (Fu & Wang, 2021). The demographic questions included age, gender, race and ethnicity, length of time in

their teacher preparation program, population preparing to teach, teaching major, teaching minor, and previous coursework focused on EMLs. These questions asked PSTs to select, from multiple choice responses, which choice “best represents” or “best describes” themselves. The questions about gender and race offered an “I prefer not to respond” choice. The responses to these questions were included for descriptive purposes.

Personal background was characterized by two questions, “are you proficient in any language other than English?” and “have you lived, worked, or studied in a non-English environment?” Participants could respond “yes” or “no” to these questions. “Proficient” was defined for participants as being able to use the language fluently and accurately in social situations. Although respondents had to make a judgement about their proficiency in another language, the definition was designed to aid in standardizing the judgements across respondents.

Educational experience was determined from response to the question, “have you participated in any practicum experiences that included students who were English language learners?” Response choices included “yes,” “no,” “I don’t know,” and “I have not had any practicum experiences yet.” This array of choices was provided to be inclusive of those PSTs who were unsure about the status of the students in their practicum experiences and those PSTs who had not had practicum experiences. These choices were provided to encourage a response rather than skipping the question (Best & Harrison, 2009).

Pre-service teacher self-efficacy for teaching EMLs was measured by responses to the *ELL Education Self-Efficacy Scale* (Fu & Wang, 2021) including three domains or subscales of self-efficacy, pedagogical content, linguistic, and sociocultural. Each domain was displayed in the survey instrument on its own page. Instructions were included at the top of each domain page and a sliding pointer was used to move between 0 and 100 to indicate a feeling of competence related to an item. Fu & Wang (2021) reported on the development and testing of their scale. They conducted exploratory factor analysis and parallel analysis that supported a 45-item scale with three dimensions. This three-factor scale explained 67.78% of the variance in the data. The internal reliability within each dimension had a Cronbach’s alpha of .95 or higher. In testing of the *ELL Education Self-Efficacy Scale* each scale item was responded to using a scale of 0 -100 with zero indicating a feeling of no competence (“cannot do at all”) to perform the item task and 100 representing a feeling of

competence (“highly certain can do”) to perform the task mentioned in the given item. Although recently developed and not widely tested, the *ELL Education Self-Efficacy Scale* (Fu & Wang, 2021) measures self-efficacy as a composite of three research-based domains: pedagogical content, linguistics, and sociocultural. These domains are unique to this scale and target areas essential to teaching EMLs (deJong & Harper, 2005; Fillmore & Snow, 2000).

Data Collection Procedures

Data collection was initiated by brainstorming a contact list of teacher educators and teacher professional organizations to email the PST recruitment letter (see Appendix B) and link to the online survey. Teacher educators were requested to disseminate the survey link and recruitment letter to PSTs and other faculty with access to PSTs. Contact was made with teacher educators in regions across the United States. The survey link was also posted on social media accounts of teacher educators. Prospective participants were provided with a link or QR code with the link, to access the survey. If consent was provided on the first page of the survey, participants answered questions and responded to scale items on the survey. Once completed, responses were saved to the University of Idaho Qualtrics platform, then downloaded and stored on a University of Idaho server.

Data Analysis Procedures

The survey data exported from the University of Idaho Qualtrics platform and saved on a University of Idaho server was imported into IBM SPSS Statistics (Version 29) for data cleaning and analysis. The data were evaluated for completeness by identifying missing data and any systematic patterns among the missing data. In addition, a cross-tabulation of the two independent variables, personal background and educational experience were evaluated for sufficient cell size. Upon review and evaluation of the 66 records for missing data, 11 records were eliminated due to missing responses across all domains of the self-efficacy scale. An additional four records were also removed from analysis because they were missing all responses to one or more self-efficacy domains. Although the study examined three domains (or levels) of self-efficacy, pedagogical content domain, linguistic domain, and sociocultural domain, they constituted an overall composite measure of self-efficacy for teaching EMLs. Therefore, eliminating the measurement of one domain for a given participant would alter the

findings and interpretation of overall PST self-efficacy. Analysis of demographic data using descriptive statistics was conducted to describe the study participants.

In response to the research questions, assumptions for MANOVA were evaluated to determine the appropriateness of MANOVA for this study (Abu-Bader, 2016; Hussey, 2010). A two-way MANOVA was planned and conducted for this analysis because it allows for the analysis of multiple dependent variables (the three domains of self-efficacy) and two independent variables (personal background and education experience), explaining how the variables are related (Abu-Bader, 2016; Bernard, 2000). Furthermore, MANOVA reduced the inflation of Type I error from conducting multiple ANOVA tests (for each level of the dependent variable). Examination of the composite of all dependent variables with MANOVA maximized the differences between the levels of the independent variables resulting in a higher likelihood of identifying differences between groups (Abu-Bader, 2016).

Summary

The current study employed a survey research design and modified snowball sampling technique to evaluate the following hypotheses:

- Main Effect 1: $H_{01}: \mu_{\text{EDEX}} = \mu_{\text{NoEDEX}}$; $H_{a1}: \mu_{\text{EDEX}} \neq \mu_{\text{NoEDEX}}$
- Main Effect 2: $H_{02}: \mu_{\text{OTHENG}} = \mu_{\text{ENGONLY}}$; $H_{a2}: \mu_{\text{OTHENG}} \neq \mu_{\text{ENGONLY}}$
- Interaction Effect: $H_{03}: \mu_{\text{EDEXOTHENG}} = \mu_{\text{EDEXENGONLY}} = \mu_{\text{NoEDEXOTHENG}} = \mu_{\text{NoEDEXENGONLY}}$; $H_{a3}: \mu_{\text{EDEXOTHENG}} \neq \mu_{\text{EDEXENGONLY}} \neq \mu_{\text{NoEDEXOTHENG}} \neq \mu_{\text{NoEDEXENGONLY}}$ (for at least two groups)

For this study, alpha was set at .05 ($\alpha = .05$). Therefore, the null hypotheses will be rejected only if $p \leq .05$. The *Pre-Service Teacher Self-Efficacy for Teaching English Language Learners* survey was deployed among PSTs across the United States, to collect data related to PST demographics, personal background, educational experience, and perceived self-efficacy for teaching EMLs. Descriptive and multivariate statistics were used to analyze the survey data and respond to the research questions.

Chapter 4: Results

Participant Demographics

Surveys from a total of 66 PSTs, 18 years of age or older, and enrolled in teacher preparation programs returned surveys for this study. Of the surveys returned, 51 were determined to be complete and were included in the analysis. The study participants were predominately between 18-21 years of age (70.6%), female (76.5%), and white (90.2%). Sixty-seven percent had been in their teacher preparation program for one to two years, and 58.8% were preparing to teach grades 6-12. Most participants reported being English monolinguals (84.3%) and having never lived, worked, or studied in a non-English environment (90.2%). Nearly two-thirds of participants reported not having had practicum experiences with EMLs (62.7%). Table 1 provides demographic characteristics of the study participants.

Table 1

Demographic Characteristics Summary

N = 51	Frequency	Percent
<i>Age Groups</i>		
18-21 years	36	70.6
22-25 years	11	21.6
26+ years	4	7.8
<i>Gender</i>		
Male	10	19.6
Female	39	76.5
Non-binary and Other	2	3.9
<i>Race/ Ethnicity</i>		
Hispanic/Latinx/Spanish origin of any race	2	3.9
American Indian or Alaska Native	0	0.0
Asian	2	3.9
Native Hawaiian/other Pacific Islander	0	0.0
Black/African American	0	0.0
White	46	90.2
Two or more races	0	0.0
Unknown	1	2.0
<i>Length of time in teaching preparation program</i>		
Less than 1 year	9	17.6
1-2 years	32	62.7
3-4 years	9	17.6
4+ years	1	2.0

(Table 1 Continued)

Population preparing to teach

Grades K-8	18	35.3
Grades 6-12	30	58.8
Grades K-12	3	5.9

Teaching minor/endorsement ^a

English	10	19.6
English as a New Language (ENL)	5	9.8
Foreign Language	3	5.9
Health/ PE	1	2.0
Literacy	9	17.6
Math	2	3.9
Science	7	13.7
Social Studies	9	17.6
Special Education	5	9.8
Other	11	21.6
No Teaching Minor	1	2.0

Taken courses with focus on EMLs

1 or more courses with primary focus on EMLs	22	43.1
No courses with primary focus on EMLs	26	51.0
Don't Know	3	5.9

Proficient in languages other than English

Yes (1 or more languages)	8	15.7
No	43	84.3

Lived, worked, studied in non-English environment

Yes	5	9.8
No	46	90.2

Practicum with EMLs

Yes	19	37.3
No	32	62.7

^a Participants could select all teaching minors and/or endorsements that apply and may therefore be counted in more than minor or endorsement area.

Analyses

A two-way multivariate analysis of variance (MANOVA) was conducted using IBM SPSS Statistics (version 29) to test the null hypotheses for main effect 1, main effect 2, and the interaction effect for educational experience and personal background on overall PST self-efficacy for teaching EMLs. An evaluation of assumptions was conducted to determine whether MANOVA was an appropriate analytical method given the study participant data. The following assumptions for MANOVA were evaluated: sample representativeness,

specific levels of measurement for independent and dependent variables, specified sample size, normal distribution of dependent variable on all levels of independent variables, homogeneity of variances, linear relationship between dependent variables, homogeneity of variance-covariance matrices, and multicollinearity.

Evaluation of Statistical Assumptions

Sample representation. In this study, a sample of 51 PSTs 18 years of age and older completed a self-efficacy survey. While they were not randomly selected, the sample characteristics reflect those of the general PST population, predominately female, white, and under 30 years of age (American Association of Colleges for Teacher Education, 2022), therefore fulfilling the assumption of representation.

Level of measurement. The independent variables, educational experience and personal background, were both measured as categorical data. The dependent variables were continuous and measured at the interval level, satisfying the assumption for level of measurement.

Sample size. The current study sample included 51 PSTs. The sample size is greater than 30 and all cells of the cross tabulation of educational experience and personal background (independent variables) contain four or more cases. This is more than three, the number of dependent variables in the study (see Table 2). Therefore, the sample size assumption was met.

Table 2

Educational Experience by Personal Background

Personal Background	Educational Experience		Total
	No Practicum experience with EMLs	Practicum experience with EMLs	
English monolingual and/or never lived, worked, studied in a non-English environment	29	12	41
Proficient in another language and/or lived, worked, studied in a non-English environment	5	5	10
Total	34	17	51

Normal distribution. The pedagogical content, linguistic, and sociocultural self-efficacy domains were assessed for normal distributions on each level of educational experience and personal background. Skewness and kurtosis coefficients, histograms, and normal probability plots were evaluated for each domain. Pedagogical content and linguistic domains showed normal distributions. The kurtosis and skewness coefficients were within ± 1.96 and visual inspection of the histograms and normal probability plots appeared to have normal distribution. The distribution of the sociocultural domain, however, was negatively skewed. After conducting a transformation of sociocultural self-efficacy to the square root, it appeared to have a normal distribution upon visual inspection of the histogram and normal probability plot. Also, the skewness and kurtosis coefficients were within ± 1.96 . Each self-efficacy domain was also evaluated for normal distribution across each level of the educational experience and personal background. In all cases the distributions approached normal distributions. Table 3 displays the skewness and kurtosis for pedagogical content, linguistics, and square root of sociocultural of self-efficacy. The assumption of normal distribution was met.

Table 3

Measure of Skewness and Kurtosis for Self-Efficacy Domains

N = 51	Self-Efficacy Domains		
	Pedagogical Content	Linguistics	Square root of Sociocultural
Skewness	-.705	-.261	.635
Std. Error of Skewness	.333	.333	.333
Kurtosis	-.167	-.973	-.441
Std. Error of Kurtosis	.656	.656	.656

Homogeneity of variances. Levene's test of equality of variances was conducted to evaluate the domains of self-efficacy across all levels of educational experience and personal background for equal variances (Abu-Bader, 2016). The results of Levene's test of equality of variances (see Table 4) for pedagogical content ($p = .521$), linguistics ($p = .212$), and sociocultural ($p = .599$) self-efficacy show no significant differences in variances across all groups. For all levels of the dependent variable, $p > .001$ and therefore the assumption of homogeneity of variances has been met.

Table 4

Levene's Test of Equality of Variances for Pedagogical Content, Linguistic, and Sociocultural Self-Efficacy

Self-Efficacy Domain	F	df1	df2	Sig.
Pedagogical content	.761	3	47	.521
Linguistic	1.557	3	47	.212
Sociocultural	.63	3	47	.599

Linear Relationship and Multicollinearity. The relationship between the pedagogical content, linguistics, and sociocultural domains of PST self-efficacy for teaching EMLs was linear. As indicated by the Bartlett's Test of Sphericity (Abu-Bader, 2016), there was a significant correlation ($\chi^2_{(df=5)} = 224.57, p < .001$) between the dependent variables, therefore meeting the assumption of linearity ($p \leq .05$). Additionally, the correlation between all pairs of the dependent variables were not larger than .80, fulfilling the assumption of multicollinearity.

Homogeneity of Variance-Covariance Matrices. The covariance matrices of all groups on the pedagogical content, linguistics, and sociocultural domains of PST self-efficacy were equal. Evaluation of Box's Test of Equality of Covariance Matrices (Abu-Bader, 2016) indicated that the covariance matrices of these three dependent variables across all groups of educational experience and personal background were equal ($p > .001$), therefore meeting the assumption (see Table 5).

Table 5

Box's Test of Equality of Covariance Matrices for Pedagogical Content, Linguistics, and Socio-Cultural Self-Efficacy

F	df1	df2	Sig.
.86	18	733.27	.629

Results of MANOVA

A two-way MANOVA was conducted (Abu-Bader, 2016) to examine the effects of educational experience and personal background on overall self-efficacy for teaching EMLs among PSTs. In this study, self-efficacy for teaching EMLs was conceptualized as a composite of PSTs self-efficacy relating to pedagogical content, teaching linguistics, and

meeting sociocultural needs of EMLs. Table 6 summarizes the mean of each self-efficacy domain measured on a scale of 0-100.

Table 6

Summary of Self-Efficacy Domain Scale Means

Subscale	N	Mean	SD
Pedagogical Content Domain	51	60.17	20.43
Linguistic Domain	51	56.50	22.33
Sociocultural Domain ^a	51	3.37	1.85

^a The values for the sociocultural domain reflects the square root of sociocultural self-efficacy (transformed sociocultural self-efficacy).

Main Effect 1- Educational Experience. The findings from the two-way MANOVA showed no significant difference between those PSTs who had educational experience with EMLs and those that did not on overall self-efficacy for teaching EMLs (Wilks' lambda = .91, $F_{(3, 45)} = 1.57, p > .05$). Educational experience accounted for 9.5% of the variance in overall self-efficacy for teaching EMLs ($\eta^2 = .095$).

The results of the post-hoc between subjects effects (see Table 7), however, indicate that PSTs who had educational experiences with EMLs were significantly different in their level of pedagogical content ($F_{(df=1, 47)} = 4.18, p < .05, \eta^2 = .082$) self-efficacy and approached significance for differences in linguistic self-efficacy ($F_{(df=1, 47)} = 3.91, p = .054, \eta^2 = .077$) than those without educational experience with EMLs. There was no significant difference between those with and without educational experience with EMLs in their level of sociocultural self-efficacy ($F_{(df=1, 47)} = .93, p > .05, \eta^2 = .019$).

Table 7

MANOVA Summary Table

Source	Dependent Variable	SS	df	MS	F	p	η^2
Educational Experience ^b	Pedagogical Content	1684.92	1	1684.92	4.18	.047	.082
	Linguistics	1862.25	1	1862.25	3.91	.054	.077
	Sociocultural ^a	3.33	1	3.33	.93	.339	.019
Personal Background ^c	Pedagogical Content	7.74	1	7.74	.02	.890	.000
	Linguistics	372.98	1	372.98	.78	.381	.016
	Sociocultural	.01	1	.01	.00	.950	.000
Educational Experience * Personal Background ^d	Pedagogical Content	121.21	1	121.21	.30	.586	.006
	Linguistics	239.99	1	239.99	.50	.481	.011
	Sociocultural	1.16	1	1.16	.32	.572	.007

(Table 7 Continued)

Error	Pedagogical Content	18954.13	47	403.28
	Linguistics	22375.60	47	476.08
	Sociocultural	167.36	47	3.56
Corrected Total	Pedagogical Content	20876.80	50	
	Linguistics	24939.25	50	
	Sociocultural	170.74	50	

^a Sociocultural self-efficacy was transformed and the values in the table represent the square root of sociocultural self-efficacy.

^b Wilks' lambda = .905, $F_{(df=3, 45)} = 1.57$, $p > .05$, $\eta^2 = .095$

^c Wilks' lambda = .953, $F_{(df=3, 45)} = .734$, $p > .05$, $\eta^2 = .047$

^d Wilks' lambda = .989, $F_{(df=3, 45)} = .170$, $p > .05$, $\eta^2 = .011$

In this study, PSTs who had educational experience with EMLs experienced significantly greater levels of pedagogical content self-efficacy (mean = 67.86, SE = 5.23) than those PSTs without this educational experience (mean = 55.61, SE = 4.89). PSTs with educational experience with EMLs also reported greater levels of linguistic self-efficacy (mean = 64.60, SE = 5.68) than those without educational experience (mean = 51.69, SE = 5.31); however, the differences in linguistic self-efficacy only approached statistical significance. In contrast, both PST with (mean = 3.10, SE = .49) and without (mean = 3.53, SE = .46) educational experience with EMLs reported similar levels of sociocultural self-efficacy for teaching EMLs. See Table 8 for domain specific self-efficacy by educational experience.

Table 8

Estimated Means of Educational Experience, Personal Background, and Educational Experience by Personal Background on Pedagogical Content, Linguistic, and Sociocultural Self-Efficacy

Variables		Mean	SE	N	
<i>Pedagogical Content</i>	<u>Educational Experience</u>				
	Other than English	No practicum with EMLs	51.46	8.98	5
		Practicum with EMLs	70.02	8.98	5
	Total	60.74	6.35	10	
English Only	No practicum with EMLs	56.38	3.87	27	
	Practicum with EMLs	67.09	5.37	14	
	Total	60.03	3.31	41	
Total	No practicum with EMLs	55.61	4.89	32	
	Practicum with EMLs	67.86	5.23	19	
	Total	60.17	2.86	51	

(Table 8 Continued)

Linguistic

Other than English	No practicum with EMLs	52.84	5.83	5
	Practicum with EMLs	73.75	9.78	5
	Total	63.29	6.90	10
English Only	No practicum with EMLs	51.47	4.12	27
	Practicum with EMLs	61.34	9.76	14
	Total	54.84	3.59	41
Total	No practicum with EMLs	51.69	5.31	32
	Practicum with EMLs	64.60	5.68	19
	Total	56.50	3.13	51
<i>Sociocultural^a</i>				
Other than English	No practicum with EMLs	3.82	.50	5
	Practicum with EMLs	2.79	.84	5
	Total	3.30	.60	10
English Only	No practicum with EMLs	3.48	.36	27
	Practicum with EMLs	3.21	.84	14
	Total	3.39	.31	41
Total	No practicum with EMLs	3.53	.46	32
	Practicum with EMLs	3.10	.49	19
	Total	3.37	.26	51

^a Sociocultural self-efficacy was transformed and the values in the table represent the square root of sociocultural self-efficacy

Main Effect 2- Personal Background. The results of the two-way MANOVA (see Table 7) showed no statistical significance between PSTs with personal background other than English (proficiency in another language and/ or experience living, working, or studying in a non-English environment) and PSTs with an English only personal background, on their level of overall self-efficacy for teaching EMLs (Wilks' lambda = .95, $F_{(3, 45)} = .73, p > .05$). In this study, personal background accounted for 4.7% of the variance in overall self-efficacy for teaching EMLs ($\eta^2 = .047$).

The results of the post hoc between subjects effects (see Table 7) show that PSTs with personal background other than English and those with an English only personal background had no significant differences on pedagogical content self-efficacy ($F_{(df=1, 47)} = .02, p > .05, \eta^2 = .00$), linguistic self-efficacy ($F_{(df=1, 47)} = .78, p > .05, \eta^2 = .016$), or sociocultural self-efficacy ($F_{(df=1, 47)} = .004, p > .05, \eta^2 = .00$).

In this study, PSTs with personal background other than English (mean = 60.74, SE = 6.35) and English only personal background (mean = 60.03, SE = 3.31) experienced similar levels of pedagogical content self-efficacy. There was also no significant difference in levels of linguistic self-efficacy between the different groups of personal background (Other than English: mean = 63.29, SE = 6.90; English only: mean = 54.84, SE = 3.59). PSTs with personal background other than English (mean = 3.30, SE = .60) and English only (mean = 3.39, SE = .31) also had similar levels of sociocultural self-efficacy (see Table 8).

Interaction Effect – Educational Experience by Personal Background. The results of the two-way MANOVA (see Table 7) showed no significant educational experience by personal background interaction effect on PSTs overall self-efficacy for teaching EMLs (Wilks' lambda = .99, $F_{(3, 45)} = .17, p > .05$). In this study, the educational experience by personal background interaction accounted for only 1.1% of variance in overall PST self-efficacy for teaching EMLs ($\eta^2 = .011$).

The results of the post hoc between-subjects effects further support the findings (see Table 7) from the Wilks' lambda of no educational experience by personal background interaction effect on any measures of self-efficacy for teaching EMLs: pedagogical content ($F_{(df=1, 47)} = .30, p > .05, \eta^2 = .006$); linguistics ($F_{(df=1, 47)} = .50, p > .05, \eta^2 = .011$); or ($F_{(df=1, 47)} = .32, p > .05, \eta^2 = .007$).

Summary

The following research questions were examined using MANOVA and the corresponding null and alternative hypotheses for main effect 1, main effect 2, and the interaction effect were evaluated. Research questions:

- 1) Are there significant differences in levels of PST self-efficacy for teaching EMLs based on PST educational experience?
- 2) Are there significant differences in levels of PST self-efficacy for teaching EMLs based on personal background?
- 3) Is there a significant difference in PST self-efficacy for teaching EMLs based on an interaction between educational experience and personal background?

Descriptive analyses indicated that the majority of PSTs participating in this study were white and female. Most participants reported no proficiency in an additional language nor experience living in a non-English speaking environment. While two-thirds reported never

having had a practicum with EMLs, half said they had taken courses with a focus on EMLs.

Multivariate tests revealed the following findings for the proposed hypotheses:

- Main Effect 1: $H_{01}: \mu_{\text{EDEX}} = \mu_{\text{NoEDEX}}$; $H_{a1}: \mu_{\text{EDEX}} \neq \mu_{\text{NoEDEX}}$
The null hypothesis was retained for main effect 1 ($p > .05$).
- Main Effect 2: $H_{02}: \mu_{\text{OTHENG}} = \mu_{\text{ENGONLY}}$; $H_{a2}: \mu_{\text{OTHENG}} \neq \mu_{\text{ENGONLY}}$
The null hypothesis was retained for main effect 2 ($p > .05$).
- Interaction Effect: $H_{03}: \mu_{\text{EDEXOTHENG}} = \mu_{\text{EDEXENGONLY}} = \mu_{\text{NoEDEXOTHENG}} = \mu_{\text{NoEDEXENGONLY}}$; $H_{a3}: \mu_{\text{EDEXOTHENG}} \neq \mu_{\text{EDEXENGONLY}} \neq \mu_{\text{NoEDEXOTHENG}} \neq \mu_{\text{NoEDEXENGONLY}}$ (for at least two groups)
The null hypothesis was retained for the interaction effect ($p > .05$).

Chapter 5: Discussion and Conclusion

The findings from this study of PST self-efficacy for teaching EMLs provide insight into personal and educational factors that can influence levels of self-efficacy. Moreover, the implications of these findings for teacher preparation programs, EMLs, in-service teachers, and school districts, when situated with previous self-efficacy research, furthers the support for assessing and fostering PST self-efficacy for teaching EMLs.

This study examined whether there were significant differences in levels of PST self-efficacy for teaching EMLs based on teacher educational experience and personal background. A two-way MANOVA revealed that the overall composite measure of PST self-efficacy for teaching EMLs was not significantly different for PSTs based on educational experience (practicum experience with or without EMLs) or personal background (other than English or English only). Additionally, there was no statistically significant educational experience by personal background effect on PST overall self-efficacy for teaching EMLs. Therefore, the null hypotheses for Main Effects 1 and 2 and the Interaction Effect were accepted. However, when self-efficacy was examined by domain (pedagogical content, linguistic, and sociocultural), there was a significant difference in mean pedagogical content self-efficacy between PSTs with and without educational experience with EMLs. Educational experience accounted for 8.2% of the variance in pedagogical content self-efficacy, a medium effect size. Additionally, the difference in mean linguistic self-efficacy for those with and without educational experience with EMLs approached significance ($p = .054$), accounting for 7.7% of variance in linguistic self-efficacy. There were no significant differences in domain specific mean self-efficacy for PSTs with other than English and English-only personal backgrounds.

Study Limitations

The research limitations of this study are those factors, outside of researcher control that limit conclusions that can be drawn from the study findings. The two major limitations of the current study were related to the sampling methodology and the survey instrument. This study sought to survey PSTs in teacher preparation programs across the United States. However, the sampling frame for this population was not accessible, as no list of PSTs at all U.S. teacher preparation programs exists and therefore it was not possible to employ a probability sampling methodology allowing for random selection of participants. In response

to this challenge, nonprobability sampling using a modified snowball sampling technique was employed. This methodological decision resulted in limitations to the generalizability of the findings beyond the study participants (Bernard, 2000; Henry, 2009).

Additionally, potential sampling bias was introduced with the modified snowball sampling method. Participant recruitment was reliant on teacher educators and PSTs self-identification through professional organizations. Distribution of the survey relied on teacher educators who were contacted by the researcher or other colleagues and professional organizations. These methods may have introduced sampling bias to the study (as discussed in the methods section). The teacher educators who elected to disseminate the survey and provided their PST students an opportunity to participate may have PST students with particular characteristics not representative of the general population of PSTs (Bernard, 2000).

The length of the survey instrument was also a limitation of this study. The *Pre-service Teacher Self-efficacy for Teaching English Language Learners* survey included a total of 11 survey questions and 45 scale items. Fifteen of the 66 surveys submitted were incomplete, missing all responses to one or more domains on the self-efficacy scale. The length of the survey may have played a contributing factor in the incompleteness of these submitted surveys (Best & Harrison, 2009).

The advantages and disadvantages related to implications of the sampling methodology and survey instrument design were weighed against the time and resource constraints of the study. It is believed that even with these limitations, the findings for the participating PSTs contribute valuable knowledge to the body of research on PST self-efficacy for teaching EMLs.

Educational Experience and Self-efficacy

The data from the current study suggest that mastery experiences and/ or vicarious experiences, such as practicum experiences with EMLs, resulted in a significantly higher level of PST pedagogical content self-efficacy for teaching EMLs. Moreover, 43% of participants reported having taken one or more courses focusing on EMLs and 37% reported having had practicum experiences which included EMLs. Those participants who had a teaching practicum with EMLs reported significantly higher perceptions of self-efficacy for employing pedagogical content specific to addressing EML needs in the classroom.

Furthermore, these participants perceived their competence to assess and provide feedback to EMLs, set goals for EMLs, and provide instruction and classroom environments that scaffold EMLs learning at significantly higher levels than those without practicum experiences with EMLs. While practicum experiences may vary across teacher preparation programs, they generally include school-based experiences in which students apply theory learned in coursework, on site, in a real classroom (Choy et al. , 2014). Through these educational experiences, PSTs are provided the opportunities to gain mastery experience, take part in vicarious experiences, and receive positive supportive feedback from cooperating teachers and/ or teacher educators. The findings from the current study indicate that practicum experiences that include EMLs positively influence PST perceived self-efficacy for implementing EML specific pedagogical content in the classroom. Similarly, Clark & Newberry (2019) found significant correlations between PST general teaching self-efficacy and mastery experiences, vicarious experiences, and verbal persuasion, although not specific to teaching EMLs. The current findings further Clark & Newberry's (2019) findings by also indicating the importance of teaching context (Bandura, 1986; Pajares, 1996) to teacher self-efficacy. The current study specified the practicum context (with EMLs) for the practicum experiences and assessed self-efficacy with items specifically related to instructing EMLs. Comparisons between self-efficacy to teach EMLs for those who had practicums with and without EMLs can illuminate further understanding of the relationship between teaching context and teacher self-efficacy. The current findings add to findings by Cho et al. (2020); who, in a mixed methods study of PST self-efficacy for teaching linguistic and culturally diverse students, reported that PSTs attributed their self-efficacy for instructing culturally and linguistically diverse learners to experiences occurring during field placement.

While findings from the current study supported the assertion that practicum experiences with EMLs resulted in significantly higher pedagogical content self-efficacy among participating PSTs, this was not the case for linguistic self-efficacy and sociocultural self-efficacy. The types of experiences during a practicum may be more closely aligned with pedagogical content than the other domains of self-efficacy (linguistic and sociocultural) examined in the current study. The items included in the pedagogical content domain of the *Pre-service Teacher Self-efficacy for Teaching English Language Learners Survey* consisted of tasks and contexts that may have been experienced or observed during a field placement or

practicum. Similarly, Mahalingappa et al. (2018), in a study of PST self-efficacy among those who participated in an electronic pen-pal program with EMLs reported similar findings. The authors reported significantly higher PST perceptions of self-efficacy for pedagogical content (“providing instructional accommodations and services” to EMLs and in using “instructional methods of teaching EMLs in mainstream classes”) among PSTs participating in direct communication and instruction with EMLs. Other self-efficacy domains related to linguistic and culturally responsive instruction were similar between PSTs with and without contact with EMLs as part of their coursework. Even though different instruments were used to assess PST self-efficacy, both the current study and Mahalingappa et al. (2018) indicate a significant relationship between context specific practicum experiences (with EMLs) and an increased perception of pedagogical content self-efficacy for teaching EMLs.

Personal Background and Self-efficacy

There was no significant difference in PST self-efficacy between those participants with a personal background other than English (proficient in a language other than English and / or had experience living, working, or studying in a non-English environment) and those who had a personal background of English only (monolingual English and no experience living, working, or studying in a non-English environment). Additionally, there were no significant differences in domain-specific self-efficacy based on PST personal background. While the multivariate analysis did not yield significant findings, there remain important questions to consider regarding PST self-efficacy based on personal experiences with language learning and exposure to non-English environments. Previous research indicates potential relationships between personal background and PST self-efficacy. Cho et al. (2020) posited that PSTs’ life experiences support higher perceptions of self-efficacy for teaching linguistically and culturally diverse students. Through interviews, Cho et al. (2020) found that PSTs described their own language learning experiences as impacting their self-efficacy for teaching culturally and linguistically diverse students. Furthermore, Minaya-Rowe (2005) describes a qualitative study of graduate student teachers who participated in a program to learn Spanish while completing a bilingual education degree or certification to teach EMLs. The Spanish course was structured similarly to a sheltered class for EMLs so teachers could experience learning a new language as a language of instruction, similar to the experience of

an EML in a U.S. public school. Participants reported that learning pedagogy through a new language highlighted the importance of comprehensible input, scaffolding, and understanding of language acquisition processes. Self-efficacy was not explicitly assessed in this research; however, interview data indicated participant perceptions of their abilities and competencies for instructing EMLs. Minaya-Rowe (2005) posits that teacher (and PST) acquisition of a second language can provide teacher insight into the role of EMLs' home language in learning English, the stages of language acquisition, and deepen understanding of culturally relevant pedagogy. Although the current study resulted in no significant findings for PST self-efficacy based on experiences with other languages and cultures, previous research in this area indicates the need for continued assessment of self-efficacy in relation to proficiency in other languages.

Moreover, drawing conclusions based on the lack of statistical significance in this study should be done with caution as the number and characteristics of participants in this study sample may have impacted the power of the statistical analysis (Hill, 1998). There were only ten participants who identified as proficient in a non-English language and/ or had lived, worked, or studied in a non-English environment. The high proportion of monolingual English participants may be a reflection of the high proportion of monolingual English speakers in the United States, 89% of U.S. born people in 2019 (the Migration Policy Institute, n.d.), posing a challenge to recruiting participants proficient in languages other than English. Additionally, this low number might possibly be indicative of proficient second language users underestimating their proficiency levels. MacIntyre et al. (1997) reported that students with higher levels of anxiety tended to underestimate their second language proficiency. Regardless, the sample size should be taken into consideration when considering this statistically insignificant result.

In response to literature on PST self-efficacy for teaching EMLs, there is a need to further examine the relationship between PST personal background and self-efficacy. Research indicates that some teachers feel low confidence and even incompetence for both communicating with EMLs and their parents and understanding the challenges with learning a new language, practices that are essential for EML student learning (Gandara et al., 2005; Coady et al., 2011). Continued investigation into the association between personal

background with a more demographically diverse and a larger sample could further the understanding of this potential source of information for PST self-efficacy.

Implications for Teacher Preparation Programs

As the K-12 student population across the United States evolves to include increasing numbers of EMLs, so must the preparation of the teachers who teach these students. With over five million (and increasing) EMLs in classrooms across the country, adequately serving these students requires teachers with intentionally designed pedagogical training and educational experiences with EMLs. Development of PST (and in-service teacher) self-efficacy must play an essential role in PST training as it bridges their learning and experience gained in the teacher preparation program to performance in the classroom through perceptions of instructional confidence and competence. The mastery and vicarious experiences in courses and practicums, and positive constructive feedback from mentor teachers and teacher educators can foster increased teaching self-efficacy for instructing students and classroom management (Pajares, 1996; Yost, 2006). The contextualized nature of self-efficacy requires that teacher preparation programs provide explicit pedagogical content, linguistic content, sociocultural content, and practicum experiences for teaching EMLs to foster PST self-efficacy (Mahalingappa et al., 2018; Yough, 2019). As indicated by findings from the current study, practicum experiences with EMLs significantly influenced perceived self-efficacy for providing pedagogical content relevant to EMLs.

In light of these findings, teacher preparation programs have an obligation to their PSTs to connect them to meaningful mastery and vicarious experiences through practicums with EMLs. For some teacher preparation programs, access to EMLs may be an obstacle; however, there is innovative research addressing these challenges, albeit limited. For example, Mahalingappa et al. (2018) found that an electronic pen-pal project, electronically connecting PSTs and EMLs, had a significant impact on PST pedagogical content self-efficacy for teaching EMLs. Yough (2019) found that a PST course-based intervention designed to provide brief mastery and vicarious experiences, social persuasion, and an environment with reduced anxiety resulted in significantly higher self-efficacy for teaching EMLs than among students who did not participate in the intervention. While Yough's (2019) research had a number of limitations, it provides a model for potential strategies to create opportunities to support development of PST self-efficacy by addressing sources of

self-efficacy within a university course. Yough's (2019) intervention exposed PSTs to enacted mastery and vicarious experiences within a supportive class environment resulting in increased self-efficacy for teaching EMLs. It is these types of creative mastery and vicarious experiences that provide vital sources of information for PST self-efficacy. Furthermore, adding to the impact of practicum experiences on pedagogical content self-efficacy as witnessed in the current study.

As teacher preparation programs consider avenues for increasing PST self-efficacy for teaching EMLs, professional development for in-service mentor teachers should not be overlooked. Support for in-service mentor teachers related to pedagogy for working with EMLs, strategies for developing positive mastery experiences, and techniques for providing positive constructive feedback can help enhance the practicum experiences of PSTs and maximize increases in self-efficacy.

The impact of practicum experiences with EMLs on PST self-efficacy found in the current research may also be indicative of the relationships and experiences a PST has with their mentor teacher during these practicums. Although not measured in the current study, the correlation between PST pedagogical content self-efficacy and mentor support during practicum experiences has been documented in the literature (Al-Awidi & Alghazo, 2012; Moulding et al., 2014; Woolfolk Hoy & Spero, 2005). Moulding et al. (2014) reported significant positive correlations between PST self-efficacy and their perceptions of support received from teacher mentors during student teaching. As we consider ways in which to better prepare PSTs to work with EMLs, we would be remiss not to consider what those practicum experiences look like. We need to not only support PSTs, but their mentors as well. In doing this, teacher preparation programs will impact EMLs by creating an informed and efficacious teaching workforce who can support the pedagogical content, linguistic and sociocultural needs of EMLs.

In the pursuit of developing pedagogically, linguistically, and socioculturally prepared and efficacious PSTs, teacher preparation programs must not forget the role of cognitive processing in development of self-efficacy. Once a PST has experiences that could lead toward development of feelings of self-efficacy, they must then cognitively process the experiences, taking into account the context and factors relating to the experience and their perceived assessment of their teaching competence (Tschannen-Moran et al., 1998). In

addition to providing practicum experiences with EMLs, teacher preparation programs can also foster environments that support PSTs in the cognitive processing of their practicum experiences. Critical thinking and reflection on practicum experiences helps PST to problem-solve and make connections between their coursework and fieldwork (Yost, 2006). High levels of self-efficacy for teaching in general and for instructing EMLs specifically, will position PSTs advantageously as they enter the teaching profession. They will be more likely to persevere in the face of challenges, support their linguistically- and culturally-diverse students academically and socially, and more effectively communicate with parents. Moreover, with the high need for teachers and the high teacher turnover rate, it is even more imperative that teacher preparation programs ensure their PSTs feel a high level of self-efficacy (Sutcher et al., 2016) as it also contributes to motivation and job satisfaction (Caprara, et al., 2003).

Identifying and understanding the assets and gaps in PST knowledge and self-efficacy for instructing EMLs is an essential component of successful PST preparation. PSTs, upon entry into the teaching workforce, will be required to address specific pedagogical, linguistic, and sociocultural needs of EMLs. While most teacher preparation programs include practicum experiences to varying degrees, the current study provides evidence that practicums, field experiences, and student teaching experiences should include EMLs to build PST self-efficacy for teaching EMLs. It is through this investment in PST self-efficacy for teaching EMLs that teacher preparation programs can contribute to the development of a teacher workforce that can persist in the face of challenge and be prepared to serve the students they will undoubtedly encounter in their classrooms.

A more far-reaching implication of the current study is that it provides evidence for the significant impact that practicum experiences with EMLs has on PST self-efficacy related to pedagogical content for EMLs. If all PSTs were required to engage in practicums with EMLs as part of their training, these findings indicate that they could potentially benefit from development from a higher sense of self-efficacy.

Future research examining PST self-efficacy for teaching EMLs based on different types of educational experiences would aid teacher preparation programs in developing best practices for providing mastery and vicarious experiences, verbal persuasion, and supportive physiological and emotional environments. A comparison of residential teacher training

programs with extensive exposure to these sources of self-efficacy, to teacher preparation programs with traditional practicum and student teacher experiences could illuminate specific characteristics that foster increased teacher self-efficacy for instructing EMLs. In particular, length of exposure to experiences with EMLs, proportion of mastery to vicarious experiences with EMLs, and content of verbal persuasion from both mentor teachers and teacher educators as factors influencing PST self-efficacy. Moreover, longitudinal studies that follow PSTs through their transition into the teaching, monitoring changes in self-efficacy for teaching EMLs, and documenting sources of self-efficacy would shed light on the lasting effects of self-efficacy gains from teacher preparation programs.

Implications for EMLs

The growing number of EMLs in U.S. K-12 public schools necessitates that all K-12 teachers be prepared to teach these students and support them in language and content learning. Student academic achievement and teacher self-efficacy interact in a reciprocal relationship (Tschannen-Moran et al., 1998). High levels of teacher self-efficacy in pedagogical content result in teacher behaviors that support high expectations, flexibility and persistence in the classroom (Ashton & Webb, 1986; Bandura, 1997; Woolfolk Hoy & Davis, 2006). These teachers impact student outcomes through increased time on academic learning and motivation to reach goals. Moreover, these behaviors foster a learning environment that supports student achievement. Teacher self-efficacy as a context specific construct, can vary in level depending on subject taught, student characteristics, and learning environment (Ashton & Webb, 1986). As evidence from the current study illustrates, PSTs with context specific practicum experiences (e.g., with EMLs) had higher perceived self-efficacy for using EML specific pedagogical content. PSTs with high teaching self-efficacy tend to apply effective teaching strategies in the classroom and have a more “pragmatic philosophical orientation toward teaching” (Anderson et al., 1988). Increasing PST self-efficacy for teaching EMLs is all the more important since a lack of self-efficacy can result in PSTs feeling less competent to engage with EMLs and feeling less prepared to meet the pedagogical, linguistic, and sociocultural needs of their EML students (Durgunoglu & Hughes, 2010). Classrooms where EMLs are afforded the opportunity to engage in mastery experiences during their learning and observe their peers model target language and content provide them with an environment that promotes and fosters student self-efficacy. Students

exposed to models of coping in addition to mastery models allows students an opportunity to witness struggle and strategies that help to overcome that struggle, overtime increasing self-efficacy (Schunk, 2003). Furthermore, an environment that includes positive, constructive feedback (verbal persuasion) from peers, teachers, and others in the educational and home environment can encourage an increase in EMLs self-efficacy. This feedback may contribute to motivating students with lower self-efficacy and achievement (Shell et al., 1995).

Implications for Teachers and Schools

Teachers in the United States are on the front line of receiving the more than five million EMLs in their classrooms and therefore tasked with the responsibility to teach and support their EMLs. Increasing numbers of EMLs and shortages of ESL and bilingual specialists means that all teachers will need to be able to teach EMLs (Lucas & Grinberg, 2008). While in-service teachers will not be participating in practicum experiences with EMLs, there remains a need for developing teacher self-efficacy for teaching EMLs. Professional development with a focus on research-based strategies for instructing EMLs (Gandara & Maxwell-Jolly, 2006), linguistics, and second language acquisition can move in-service teachers toward feeling prepared to teach their EMLs. Professional development that exposes in-service teachers to enactive mastery experiences, vicarious experiences, verbal persuasion, and positive anxiety-reduced learning environments can potentially increase pedagogical content self-efficacy for teaching EMLs as was indicated in PSTs in the current study. This professional development could take the form of professional learning communities where teachers work together and with teacher educators to enact newly learned research-based instructional strategies within their classroom while other teachers observe, learn, and provide feedback. These processes would provide the vital sources of information necessary for further increasing in-service teacher self-efficacy for teaching EMLs.

Schools are in the unique position to support self-efficacy for teaching EMLs among in-service and newly-graduated PSTs as providers of teacher professional development and induction for new teachers entering the teaching workforce. As PSTs move into teaching positions at schools, they can feel a decrease in teaching self-efficacy for a variety of reasons (e.g., challenges to meeting their own performance expectations, feeling unprepared for their teaching context, and the complexities involved in teaching) (Woolfolk Hoy & Spero, 2005). For PSTs entering the teaching profession with low self-efficacy for teaching EMLs, the

current study's findings indicate a role for K-12 schools similar to teacher preparation programs. Through school induction programs, new teachers can be paired with mentors who have training in pedagogical content for teaching EMLs and mentoring techniques that support efficacy development. Opportunities for new teachers to observe mentor teachers model instruction for EMLs and receive feedback on their own teaching of EMLs could increase teaching self-efficacy and moreover, teacher job satisfaction and EML academic achievement (Caprara et al., 2003; Caprara et al., 2006). In doing this schools would be providing a supportive learning environment for both their teachers and EMLs.

Future Research Recommendations

The significant influence of educational experience with EMLs on PST pedagogical content self-efficacy identified in this study provides further evidence for next steps in PST self-efficacy for teaching EMLs research. Future research should examine sources of information gained during practicum experiences, longitudinal studies, and guided reflection. Further investigation into the sources of information provided through practicum experiences and their impact on PST self-efficacy for teaching EMLs will aid teacher educators in understanding the characteristics of practicums that best foster PST self-efficacy (Clark & Newberry, 2019). Characteristics of the sources of information (mastery experiences, vicarious experiences, verbal persuasion, and physiological states) specifically related to teaching EMLs that result in increased PST self-efficacy can then be intentionally incorporated into practicum experiences.

Longitudinal studies of PSTs' self-efficacy for teaching EMLs while in teacher preparation programs and then as they transition to becoming in-service teachers could help to characterize the changes in self-efficacy as teachers enter the workforce (Holzberger et al., 2013). Furthermore, investigation of the impact that practicums (and other educational experiences) have on PST and in-service teacher self-efficacy for teaching EMLs can guide development of teacher preparation experiences.

As indicated by the positive findings from this study, future research should examine the role of reflection in practicum experiences as a necessary component in fostering self-efficacy for teaching EMLs. Examining the impact of reflection, including timing and type of reflection, can inform teacher preparation programs' practicum curriculum. Development of critical reflection skills integrated into a routine associated with teaching experiences will

provide PSTs with valuable skills needed to continue self-efficacy development as they transition to becoming in-service teachers (Black, 2015; Yost, 2006).

The findings from this study also indicate the need for further investigation of the relationship between personal background and self-efficacy in larger more diverse samples of PSTs. Larger studies with high levels of PSTs with additional language proficiency and experience living in non-English cultures would help provide further evidence of influence (or lack there of) between these factors and PST self-efficacy for teaching EMLs.

This study also highlighted some potential challenges with measuring PST self-efficacy. While many researchers approach the study of PST self-efficacy for teaching EMLs from similar theoretical perspectives and there is some agreement on many of the core competencies for teaching EMLs, the measurement of self-efficacy for teaching EMLs remains inconsistent (Carney, 2012; Fu & Wang, 2021; Siwatu, 2007). Inconsistent formatting of self-efficacy scale items and responses, in addition to lack of linguistic competencies on self-efficacy scales makes comparisons between research studies challenging. As researchers, the way we ask questions, measure responses, and the competencies we deem important to include on our instruments, reflect what we value in regard to teaching EMLs and therefore we must include items that speak to competencies that bring equity to EMLs in our classrooms.

In summary, the findings from the current study suggest needs for future research. Future research on PST self-efficacy for teaching EMLs should:

- Examine the sources of self-efficacy information from PST practicums with EMLs
- Conduct longitudinal studies following PSTs from teacher preparation through in-service teaching to evaluate the short- and long-term effects of practicums with EMLs on teacher self-efficacy
- Explore the role of guided reflection during practicum experiences with EMLs
- Further investigate the role of personal background (experiences with non-English languages and culture) on PST self-efficacy for teaching EMLs.

Conclusion

In light of the changing demographics of student populations toward increasing numbers of EMLs across schools in the United States, it is vital that all teachers feel prepared and competent to interact with and instruct these students. Identification and fostering of

factors that inform self-efficacy development can potentially impact PST ability to address specific pedagogical, linguistic and sociocultural needs of EMLs they meet in their classrooms. As social cognitive theory proposes, self-efficacy is an individual's perception of his or her, "ability to organize and execute the actions necessary to accomplish a specific task at a desired level" (p. 210, Tschannen-Moran et al., 1998). Bandura (1986; 1997) further explains that mastery experiences, vicarious experiences, verbal persuasion, and physiological and emotional states act as sources of self-efficacy. Identifying specific sources of self-efficacy among PSTs corresponding to teaching EMLs can inform the training of PSTs, better preparing them for success as teachers of EMLs. The research questions posed in this study sought to determine whether PST personal background or educational experience made a difference in self-efficacy for teaching EMLs. PSTs who had practicums with EMLs reported significantly higher levels of perceived pedagogical content self-efficacy compared to those without these experiences. These findings provide further evidence of the importance and impact of context specific practicum experiences with EMLs to the development of self-efficacy for teaching these students. Furthermore, these findings indicate the power of providing opportunities for PSTs to engage with EMLs before entering the teaching workforce. Quality practicum experiences can yield dual benefits: in providing opportunities for new teachers to engage in self-efficacy fostering experiences with EMLs and in creating effective language and content learning environments in which EMLs can learn and thrive. Ultimately, an efficacious teacher workforce will contribute to equity in the classroom for all students.

References

- Abu-Bader, S. (2016). *Advanced and multivariate statistical methods for social science research*. Oxford University Press.
- Al-Awidi, H. M., & Alghazo, I. M. (2012). The effect of student teaching experience on preservice elementary teachers' self-efficacy beliefs for technology integration in the UAE. *Educational Technology Research and Development, 60*(5), 923–941.
<https://doi.org/10.1007/s11423-012-9239-4>
- American Association for Colleges of Teacher Education. (2022). *Colleges of education: A national portrait (2nd Edition) Executive Summary*.
<https://aacte.org/resources/research-reports-and-briefs/colleges-of-education-a-national-portraitv2/>
- Anderson, R. N., Greene, M. L., & Loewen, P. S. (1988). Relationships among students' and teachers' thinking skills, sense of efficacy, and student achievement. *The Alberta Journal of Educational Research, 34*(2), 148–165.
- Armor, D., Conry-Oseguera, P., Cox, M., King, N., McDonnell, L., Pascal, A., Pauly, E., & Zellman, G. (1976). *Analysis of the school preferred reading program in selected Los Angeles minority school*. Rand. <https://files.eric.ed.gov/fulltext/ED130243.pdf>
- Ashton, P. (1984). Teacher Efficacy: A motivational paradigm for effective teacher education. *Journal of Teacher Education, 35*(5), 28–32.
<https://doi.org/10.1177/002248718403500507>
- Ashton, P., & Webb, R. B. (1986). *Making a difference: Teachers' sense of efficacy and student achievement*. Longman.
- Bandura, Albert. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall, Inc.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman and Company.
- Bernard, H. R. (2000). *Social research methods: Qualitative and quantitative approaches*. SAGE Publications Ltd.
- Best, S., & Harrison, C. (2009). Internet survey methods. In L. Bickman & D. Rog (Eds.), *The SAGE handbook of applied social research methods* (2nd ed., pp. 413–434). SAGE Publications Ltd.

- Black, G. L. (2015). Developing teacher candidates' self-efficacy through reflection and supervising teacher support. *In Education, 21*(1), 78–98.
<https://doi.org/10.37119/ojs2015.v21i1.171>
- Bryan, L. A., & Atwater, M. M. (2002). Teacher beliefs and cultural models: A challenge for science teacher preparation programs. *Science Education, 86*(6), 821–839.
<https://doi.org/10.1002/sce.10043>
- Byrnes, D. A., Kiger, G., & Lee Manning, M. (1997). Teachers' attitudes about language diversity. *Teaching and Teacher Education, 13*(6), 637–644.
[https://doi.org/10.1016/S0742-051X\(97\)80006-6](https://doi.org/10.1016/S0742-051X(97)80006-6)
- Caprara, G. V., Barbaranelli, C., Borgogni, L., & Steca, P. (2003). Efficacy beliefs as determinants of teachers' job satisfaction. *Journal of Educational Psychology, 95*(4), 821–832. <https://doi.org/10.1037/0022-0663.95.4.821>
- Caprara, G. V., Barbaranelli, C., Steca, P., & Malone, P. S. (2006). Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level. *Journal of School Psychology, 44*(6), 473–490.
<https://doi.org/10.1016/j.jsp.2006.09.001>
- Carney, M. S. (2012). *Teaching English language learners scale (TELLS): A study of validity and reliability* (Publication No. 3534005) [Doctoral Dissertation, University of Missouri - Columbia]. ProQuest Dissertations and Theses Global.
- Cho, S., Lee, H.-J., & Herner-Patnode, L. (2020). Factors influencing preservice teachers' self-efficacy in addressing cultural and linguistic needs of diverse learners. *The Teacher Educator, 55*(4), 411–429. <https://doi.org/10.1080/08878730.2020.1805835>
- Choy, D., Wong, A. F. L., Goh, K. C., & Ling Low, E. (2014). Practicum experience: Pre-service teachers' self-perception of their professional growth. *Innovations in Education & Teaching International, 51*(5), 472–482.
<https://doi.org/10.1080/14703297.2013.791552>
- Clair, N. (1995). Mainstream classroom teachers and ESL students. *TESOL Quarterly, 29*(1), 189–196. <https://doi.org/10.2307/3587817>
- Clark, S., & Newberry, M. (2019). Are we building preservice teacher self-efficacy? A large-scale study examining teacher education experiences. *Asia-Pacific Journal of Teacher Education, 47*(1), 32–47. <https://doi.org/10.1080/1359866X.2018.1497772>

- Coady, M., Harper, C., & de Jong, E. (2011). From preservice to practice: Mainstream elementary teacher beliefs of preparation and efficacy with English language learners in the state of Florida. *Bilingual Research Journal*, 34(2), 223–239.
<https://doi.org/10.1080/15235882.2011.597823>
- Couper, M. P., Traugott, M. W., & Lamias, M. J. (2001). Web survey design and administration. *The Public Opinion Quarterly*, 65(2), 230–253.
- de Jong, E. J., & Harper, C. A. (2005). Preparing mainstream teachers for English-language learners. *Teacher Education Quarterly*, Spring, 101–124.
- Durgunoğlu, A. Y., & Hughes, T. (2010). How prepared are the U. S. preservice teachers to teach English language learners? *International Journal of Teaching and Learning in Higher Education*, 22(1), 32–41.
- Fillmore, L. W., & Snow, C. (2000). *What teachers need to know about language*. Center for Applied Linguistics. <https://files.eric.ed.gov/fulltext/ED444379.pdf>
- Fowler, F. J. (2009). *Survey research methods* (4th ed.). SAGE Publications, Inc.
- Fu, Y. & Wang, J. (2021). Assessing mainstream pre-service teachers' self-efficacy to teach English language learners. *International Journal of Instruction*, 14(3), 153–174.
<https://doi.org/10.29333/iji.2021.1439a>
- Gandara, P., & Maxwell-Jolly, J. (2006). Critical issues in developing the teacher corps for English learners. In K. Tellez & H. C. Waxman (Eds.), *Preparing quality educators for English language learners: Research, policies, practices* (pp. 99–120). Lawrence Erlbaum Associates.
- Gandara, P., Maxwell-Jolly, J., & Driscoll, A. (2005). *Listening to teachers of English language learners: A survey of California teachers' challenges, experiences, and professional development needs*. The Center for the Future of Teaching and Learning.
<https://escholarship.org/uc/item/6430628z>
- Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology*, 76(4), 569–582. <https://doi.org/10.1037/0022-0663.76.4.569>
- Gras, C., & Kitson, C. (2021). ESL teacher certification policy: Current trends and best practices. *Frontiers in Education*, 6:591993.
<https://doi.org/10.3389/feduc.2021.591993>

- Guskey, T. R., & Passaro, P. D. (1994). Teacher efficacy: A study of construct dimensions. *American Educational Research Journal*, 31(3), 627–643.
<https://doi.org/10.2307/1163230>
- Halliday, M. A. K. (1993). Towards a language-based theory of learning. *Linguistics and Education*, 5, 93–116.
- Halliday, M. A. K., & Mathiessen, C. (2013). *An introduction to functional grammar* (3rd ed.). Routledge.
- Henry, G. (2009). Practical sampling. In L. Bickman & D. Rog (Eds.), *The SAGE handbook of applied social research methods* (2nd ed., pp. 77–105). SAGE Publications Ltd.
- Hill, R. (1998). What sample size is “enough” in internet survey research? *Interpersonal computing and technology: An electronic journal for the 21st century*, 6(3–4), 1–10.
- Holzberger, D., Philipp, A., & Kunter, M. (2013). How teachers’ self-efficacy is related to instructional quality: A longitudinal analysis. *Journal of Educational Psychology*, 105, 774. <https://doi.org/10.1037/a0032198>
- Hussey, D. (2010). Nonprobability sampling. In N. Salkind (Ed.), *Encyclopedia of research design* (pp. 922–925). SAGE Publications, Inc.
<https://doi.org/10.4135/9781412961288.n274>
- Irwin, V., Wang, K., Hein, S., Zhang, J., Burr, R., Roberts, A., Barmer, A., Mann, F. B., Dilig, R., Parker, S., Nachazel, T., Barnett, M., & Purcell, S. (2022). *Report on the condition of education 2022*. National Center for Education Statistics.
<https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2022144>.
- Jimenez-Silva, M., Olson, K., & Jimenez Hernandez, N. (2012). The confidence to teach English language learners: Exploring coursework’s role in developing preservice teachers’ efficacy. *The Teacher Educator*, 47(1), 9–28.
<https://doi.org/10.1080/08878730.2011.632471>
- Karabenick, S., & Noda, P. (2004). Professional development implications of teachers’ beliefs and attitudes toward English language learners. *Bilingual Research Journal*, 28, 55–75. <https://doi.org/10.1080/15235882.2004.10162612>
- Klassen, R. M., Tze, V. M. C., Betts, S. M., & Gordon, K. A. (2011). Teacher efficacy research 1998–2009: Signs of progress or unfulfilled promise? *Educational Psychology Review*, 23(1), 21–43. <https://doi.org/10.1007/s10648-010-9141-8>

- Knoblauch, D., & Woolfolk Hoy, A. (2008). "Maybe I can teach those kids." The influence of contextual factors on student teachers' efficacy beliefs. *Teaching and Teacher Education*, 24(1), 166–179. <https://doi.org/10.1016/j.tate.2007.05.005>
- Lewis, J. L., Ream, R. K., Bocian, K. M., Cardullo, R. A., Hammond, K. A., & Fast, L. A. (2012). Con cariño: Teacher caring, math self-efficacy, and math achievement among Hispanic English learners. *Teachers College Record*, 114(7), 1–42. <https://doi.org/10.1177/016146811211400701>
- Loeb, S., Soland, J., & Fox, L. (2014). Is a good teacher a good teacher for all? Comparing value-added of teachers with their English learners and non-English learners. *Educational Evaluation and Policy Analysis*, 36(4), 457–475. <https://doi.org/10.3102/0162373714527788>
- Lucas, T., & Grinberg, J. (2008). Responding to the linguistic reality of mainstream classrooms: Preparing all teachers to teach English language learners. In M. Cochran-Smith, S. Feiman-Nemser, D. J. McIntyre (Eds.), *Handbook of research on teacher education: Enduring questions in changing contexts* (3rd ed, pp. 606–636). Routledge.
- Luykx, A., Lee, O., & Edwards, U. (2008). Lost in translation: Negotiating meaning in a beginning ESOL science classroom. *Educational Policy*, 22(5), 640–674. <https://doi.org/10.1177/0895904807307062>
- MacIntyre, P. D., Noels, K. A., & Clément, R. (1997). Biases in self-ratings of second language proficiency: The role of language anxiety. *Language Learning*, 47(2), 265–287. <https://doi.org/10.1111/0023-8333.81997008>
- Mahalingappa, L., Hughes, E. M., & Polat, N. (2018). Developing preservice teachers' self-efficacy and knowledge through online experiences with English language learners. *Language & Education: An International Journal*, 32(2), 127–146. <https://doi.org/10.1080/09500782.2017.1417996>
- Marx, S. (2000, April 24–28). *An exploration of pre-service teacher perceptions of second language learners in the mainstream classroom* [paper presentation]. Annual Meeting of the American Educational Research Association, New Orleans, LA, United States.

- Marx, S., & Pray, L. (2011). Living and learning in Mexico: Developing empathy for English language learners through study abroad. *Race Ethnicity and Education, 14*(4), 507–535. <https://doi.org/10.1080/13613324.2011.558894>
- Medina, A., Hathaway, J., & Pilonieta, P. (2015). How preservice teachers' study abroad experiences lead to changes in their perceptions of English language learners. *Frontiers: The Interdisciplinary Journal of Study Abroad, 25*(1), 73-91. <https://doi.org/10.36366/frontiers.v25i1.346>
- Menken, K., & Antunez, B. (2001). *An overview of the preparation and certification of teachers working with limited English proficient (LEP) students*. National Clearinghouse for Bilingual Education. <https://files.eric.ed.gov/fulltext/ED455231.pdf>
- Migration Policy Institute. (n.d.). *State language data—ID*. <https://www.migrationpolicy.org/data/state-profiles/state/language/US>
- Minaya-Rowe, L. (2006). Training teachers through their students' first language. In K. Tellez & H. C. Waxman (Eds.), *Preparing quality educators for English language learners: Research, policies, and practices* (pp. 23–44). Lawrence Erlbaum Associates, Inc.
- Mojavezi, A., & Tamiz, M. P. (2012). The Impact of Teacher Self-efficacy on the Students' Motivation and Achievement. *Theory and Practice in Language Studies, 2*(3), 483–491. <https://doi.org/10.4304/tpls.2.3.483-491>
- Moulding, L. R., Stewart, P. W., & Dunmeyer, M. L. (2014). Pre-service teachers' sense of efficacy: Relationship to academic ability, student teaching placement characteristics, and mentor support. *Teaching and Teacher Education, 41*, 60–66. <https://doi.org/10.1016/j.tate.2014.03.007>
- National Center for Education Statistics. (2022a, July). *Table 209.42. Percentage of public and private school teachers who teach English learner students and students with disabilities and percentage with selected qualifications or coursework, by selected teacher and school characteristics, 2020-21*. https://nces.ed.gov/programs/digest/d21/tables/dt21_209.42.asp

- National Center for Education Statistics. (2022b). *Condition of Education: English learners in public schools*. U.S. Department of Education, Institute of Education Sciences. Retrieved 1/26/2023, from <https://nces.ed.gov/programs/coe/indicator/cgf>
- National Council of Teachers of English. (2008). *English language learners: A policy research brief*. <http://www.ncte.org>
- O’Neal, D. D., Ringler, M., & Rodriguez, D. (2008). Teachers’ perceptions of their preparation for teaching linguistically and culturally diverse learners in rural eastern North Carolina. *The Rural Educator*, 30(1), 5-13. <https://doi.org/10.35608/ruraled.v30i1.456>
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66(4), 543–578. <https://doi.org/10.3102/00346543066004543>
- Pajares, F., Hartley, J., & Valiante, G. (2001). Response format in writing self-efficacy assessment: Greater discrimination increases prediction. *Measurement and Evaluation in Counseling and Development*, 33(4), 214–221.
- Pajares, F., & Miller, M. D. (1994). The role of self-efficacy and self-concept beliefs in mathematical problem-solving: A path analysis. *Journal of Educational Psychology*, 86(2), 193–203.
- Pajares, F., & Schunk, D. H. (2002). Self and self-belief in psychology and education: A historical perspective. In J. Aronson (Ed.), *Improving academic achievement* (pp. 1–31). Academic Press.
- Pappamihiel, E. (2007). Helping preservice content-area teachers relate to English language learners: An investigation of attitudes and beliefs. *TESL Canada Journal*, 24(2), 42–60. <https://doi.org/10.18806/tesl.v24i2.138>
- Pew Research Center. (2021). *Mobile fact sheet*. <https://www.pewresearch.org/internet/fact-sheet/mobile/>
- Reeves, J. (2009). A sociocultural perspective on ESOL teachers’ linguistic knowledge for teaching. *Linguistics and Education*, 20(2), 109–125. <https://doi.org/10.1016/j.linged.2008.11.001>
- Rizzuto, K. C. (2017). Teachers’ perceptions of ELL students: Do their attitudes shape their instruction? *The Teacher Educator*, 52(3), 182–202. <https://doi.org/10.1080/08878730.2017.1296912>

- Ross, J. A. (1994, June). *Beliefs that make a difference: Ontario Institute for Studies in Education* [Conference session]. Annual Meeting of the Canadian Association for Curricular Studies, Calgary, Alberta, Canada.
<https://files.eric.ed.gov/fulltext/ED379216.pdf>
- Samson, J. F., & Collins, B. A. (2012). *Preparing all teachers to meet the needs of English language learners*. Center for American Progress.
<https://files.eric.ed.gov/fulltext/ED535608.pdf>
- Schaeffer, K. (2019, August 23). *Most U.S. teens who use cellphones do it to pass time, connect with others, learn new things*. Pew Research Center.
<https://www.pewresearch.org/fact-tank/2019/08/23/most-u-s-teens-who-use-cellphones-do-it-to-pass-time-connect-with-others-learn-new-things/>
- Schleppergrell, M. (2004). *The language of schooling: A functional linguistics perspective*. Lawrence Erlbaum Associates, Inc.
- Schunk, D. H. (1982). Effects of effort attributional feedback on children's perceived self-efficacy and achievement. *Journal of Educational Psychology, 74*(4), 548–556.
- Schunk, D. H. (1983). Ability versus effort attributional feedback: Differential effects on self-efficacy and achievement. *Journal of Educational Psychology, 75*(6), 848–856.
- Schunk, D. H. (1987). Peer models and children's behavioral change. *Review of Educational Research, 57*(2), 149–174. <https://doi.org/10.3102/00346543057002149>
- Schunk, D. H. (2003). Self-efficacy for reading and writing: Influence of modeling, goal setting, and self-evaluation. *Reading & Writing Quarterly, 19*(2), 159–172.
<https://doi.org/10.1080/10573560308219>
- Schunk, D. H., & Usher, E. L. (2012). Social cognitive theory and motivation. In R. M. Ryan (Ed.), *The Oxford handbook of human motivation* (pp. 13–27). Oxford University Press.
- Shell, D. F., Colvin, C. M., & Bruning, R. H. (1989). Self-efficacy and outcome expectancy mechanisms in reading and writing achievement. *Journal of Educational Psychology, 81*(1), 91–100.
- Siwatu, K. O. (2007). Preservice teachers' culturally responsive teaching self-efficacy and outcome expectancy beliefs. *Teaching and Teacher Education, 23*(7), 1086–1101.
<https://doi.org/10.1016/j.tate.2006.07.011>

- Sue, V., & Ritter, L. (2012). *Conducting online surveys*. SAGE Publications, Inc.
<https://doi.org/10.4135/9781506335186>
- Sutcher, L., Darling-Hammond, L., & Carver-Thomas, D. (2016). *A coming crisis in teaching? Teacher supply, demand, and shortages in the U.S.* Learning Policy Institute.
- Tellez, K., & Waxman, H. (2006). Preparing quality teachers for English language learners: An overview of the critical issues. In K. Tellez & H. Waxman (Eds.), *Preparing quality educators for English language learners: Research, policy, and practice* (pp. 1–22). Lawrence Erlbaum Associates, Inc.
- Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*(7), 783–805.
[https://doi.org/10.1016/S0742-051X\(01\)00036-1](https://doi.org/10.1016/S0742-051X(01)00036-1)
- Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher Efficacy: Its meaning and measure. *Review of Educational Research, 68*(2), 202–248.
<https://doi.org/10.3102/00346543068002202>
- Turgut, R., Adibelli Sahin, E., & Huerta, M. (2016). Changes in preservice teachers' perceptions of preparedness to teach English language learners (ELLs) in mainstream classrooms. *Journal of Ethnographic & Qualitative Research, 10*, 291–305.
- Vieluf, S., Kunter, M., & van de Vijver, F. J. R. (2013). Teacher self-efficacy in cross-national perspective. *Teaching and Teacher Education, 35*, 92–103.
<https://doi.org/10.1016/j.tate.2013.05.006>
- Walker, A., Shafer, J., & Iiams, M. (2004). “Not in my classroom”: Teacher attitudes towards English language learners in the mainstream classroom. *NABE, 2*(1), 130–160.
- Webster, N. L., & Valeo, A. (2011). Teacher preparedness for a changing demographic of language learners. *TESL Canada Journal, 28*(2) 105–128.
<https://doi.org/10.18806/tesl.v28i2.1075>
- Woolfolk Hoy, A., & Davis, H. A. (2006). Teacher self-efficacy and its influence on the achievement of adolescents. In T. Urdan & F. Pajares (Eds.), *Self-efficacy beliefs of adolescents* (pp. 117–137). Information Age Publishing.

- Woolfolk Hoy, A. W., & Spero, R. B. (2005). Changes in teacher efficacy during the early years of teaching: A comparison of four measures. *Teaching and Teacher Education*, *21*(4), 343–356. <https://doi.org/10.1016/j.tate.2005.01.007>
- Yost, D. S. (2006). Reflection and self-efficacy: Enhancing the retention of qualified teachers from a teacher education perspective. *Teacher Education Quarterly*, *33*(4), 59–76.
- Yough, M. (2019). Tapping the sources of self-efficacy: Promoting preservice teachers' sense of efficacy for instructing English language learners. *The Teacher Educator*, *54*(3), 206–224. <https://doi.org/10.1080/08878730.2018.1534031>
- Youngs, C. S., & Youngs, G. A. (2001). Predictors of mainstream teachers' attitudes toward ESL students. *TESOL Quarterly*, *35*(1), 97–120. <https://doi.org/10.2307/3587861>
- Zeichner, K. (2003). The adequacies and inadequacies of three current strategies to recruit, prepare, and retain the best teachers for all students. *Teachers College Record*, *105*(3), 490–519.

Appendix A

PST Self-Efficacy for Teaching English Language Learners Survey

PB1 Please select the age category that best represents your age:

- 18-21 years
- 22-25 years
- 26-29 years
- 30 years or older

PB2 Select the gender that best describes you

- Male
- Female
- Non-binary
- Other
- I prefer not to respond

PB3 Select the race/ethnicity that best describes you

- Hispanic or Latinx or Spanish Origin of any race
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Other Pacific Islander
- Black or African American
- White
- Two or more races
- I prefer not to respond

PB4 Are you proficient in any language other than English? (able to use the language fluently and accurately in social situations)

- No
- Yes. I am proficient in one or more languages other than English.

PB5 Have you ever lived, worked, or studied in a non-English environment?

- Yes
- No

TEE1 For how long have you been in the teacher preparation program?

- Just started, less than 1 year
- 1-2 years
- 3-4 years
- more than 4 years

TEE2 What population are you preparing to teach?

- PreK
- Grades K-8
- Grades 6-12
- Grades K-12
- Adult Learners
- Other

TEE3 What is your teaching major? (choose only 1)

- Elementary Education
- Secondary Education
- Special Education

TEE4 What is your teaching minor or endorsement? (select all that apply)

- English as a new language (ENL)

- Literacy
- Math
- Science
- Social Studies
- Foreign language
- Special Education
- Health/PE
- English
- Other
- I do not have a teaching minor or endorsement

TEE5 Have you taken any courses with a primary focus on English language learners?

- No
- Yes, 1-2 classes
- Yes, 3 or more classes
- I don't know

TEE6 Have you participated in any **practicum experiences** that included students who were English language learners?

- I have not had any practicum experiences yet
- No
- Yes
- I don't know

PCD Indicate how competent you feel about instructing English language learners using the 100-point scale with **0 representing "Cannot do at all"** and **100 representing "Highly certain you can do"**. (0-100 sliding scale to the right of each statement)

1. I can differentiate assessments to evaluate the English skills and academic learning of English language learning (ELL) students.
2. I can use a variety of assessments to track ELL students' academic achievement in content areas.
3. I can accommodate ELL students' learning needs while planning and administering assessments
4. I can skillfully analyze and interpret ELL students' assessment results.
5. I can provide constructive feedback to ELL students based on their assessment results.
6. I can use appropriate grouping strategies to engage ELL students in collaborative learning.
7. I can set clear learning goals for ELL students.
8. I can use non-linguistic activities (e.g. visual and kinesthetic activities) to help ELL students formulate and elaborate on knowledge.
9. I can provide enough wait time for ELL students to respond to my questions.
10. I can assign meaningful homework and practice for ELL students to apply and reinforce knowledge taught in class.
11. I can establish consistent schedules to help ELL students adjust to the classroom environment.
12. I can use a variety of strategies to manage ELL students' disruptive behaviors and other special needs/ difficulties.
13. I can help ELL students practice the classroom routines through modeling.
14. I can create clear classroom rules and communicate them effectively to ELL students.
15. I can effectively work with ELL students to address their discipline problems.
16. I can develop higher-order thinking skills in my ELL students through teaching the curriculum.
17. I can provide ELL students with a curriculum that is challenging and creative.
18. I can integrate abundant technological resources in the curriculum to help ELL students learn more effectively.

LD. Indicate how competent you feel about providing linguistic instruction for English language learners using the 100-point scale with **0 representing "Cannot do at all"** and **100**

representing "Highly certain you can do". (0-100 sliding scale to the right of each statement)

19. I can motivate English language learning (ELL) students to pay attention to language irregularities that may confuse them.
20. I can teach some basic principles of word formation to aid ELL students' vocabulary acquisition.
21. I can understand the English variability displayed by ELL students, such as vernacular dialects and accents.
22. I can use my metalinguistic knowledge to analyze the similarities and differences between English and other languages.
23. I can use my knowledge in second language acquisition to support ELL students' learning.
24. I can create opportunities for ELL students to speak in their native language.
25. I can ensure that ELL students understand the information conveyed to them in class.
26. I can distinguish between ELL students' academic language proficiency and social/conversational language proficiency.
27. I can explicitly teach academic terminologies that are challenging to ELL students.
28. I can explicitly teach text structures to ELL students, such as differences in narratives and expository texts.
29. I can address the discourse patterns and rhetorical devices pertinent to academic tasks.

SCD. Indicate how competent you feel addressing socio-cultural issues when instructing English language learners using the 100-point scale with **0 representing "Cannot do at all"** and **100 representing "Highly certain you can do"**. (0-100 sliding scale to the right of each statement)

30. I can show empathy and support for English language learning (ELL) students who experience hardships.
31. I can understand the challenges and anxieties that ELL students may undergo in adapting to a different culture.
32. I can boost the self-confidence and self-esteem of ELL students
33. I can appreciate the cultures and values that ELL students bring to the class.

34. I can promote diversity and mutual respect in class.
35. I can maximize opportunities for ELL students interacting with their English-proficient peers.
36. I can help my English-speaking students deepen their understanding about other cultures.
37. I can spend time on helping ELL students develop a sense of belonging to the learning community.
38. I can encourage ELL students to make their voice heard.
39. I can accumulate knowledge of ELL students' home cultures.
40. I can develop a critical and impartial perspective of ELL students' families.
41. I can maintain frequent communications with ELL students' parents.
42. I can work collaboratively with parents to address the special needs of ELL students.
43. I can recognize the discontinuity between ELL students' home culture and school culture.
44. I can build connections between ELL students' cultural background and their classroom learning experiences.
45. I can identify rich resources in the local communities to support ELL students' learning.

Appendix B
PST Recruitment Letter

Dear Pre-Service Teacher:

Are you 18 years of age or older and enrolled in a teacher preparation program?

Would you like to be part of research that could potentially help teacher preparation programs support pre-service teacher confidence to work with English language learners?

Hello, my name is Dawn McCusker and I am a doctoral student in the College of Education at the University of Idaho. Under the guidance of Dr. Janine Darragh, from the Department of Curriculum and Instruction I am conducting a research study to better understand the confidence that pre-service teachers feel toward teaching English language learners (ELLs).

It will only take 15 minutes of your time to share your perceptions on an anonymous Pre-service Teacher Self-Efficacy Survey.

Access the survey with the link below or scan the QR code.

Thank you for your time!