Developing a Pre-service Teachers' Critical Literacy Beliefs Instrument

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Authorization to Submit Dissertation

This dissertation of Vera Sotirovska, submitted for the degree of Doctor of Philosophy with a Major in Education and titled "Developing a Pre-service Teachers' Critical Literacy Beliefs Instrument," has been reviewed in final form. Permission, as indicated by the signatures and dates below, is now granted to submit final copies to the College of Graduate Studies for approval.

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Abstract

This study focuses on pre-service teachers' experiences and beliefs about critical literacy, the importance of critical literacy, and the lack of explicit practices known about how to teach critical literacy in pre-service teacher education. Data were collected for eight weeks using the Critical Literacy Beliefs Survey (CLBS-1). A sample (N=405) of pre-service teachers from across the United States were recruited to take the Critical Literacy Beliefs Survey. The CLBS-1 was developed to examine pre-service teachers' beliefs of critical literacy and answer the following research question: To what extent does the Critical Literacy Beliefs Survey (CLBS-1) represent the hypothesized dimensions of critical literacy found in the literature? Survey-development methods (Johnson & Morgan, 2016) were used to examine if Lewison et al.'s (2002) critical literacy framework can be rendered into a quantitative instrument to explore pre-service teachers' critical literacy beliefs. Using Confirmatory Factor Analysis (CFA), the factor structure of the CLBS-1 was examined and compared to the collected data from a pre-service teacher sample. Findings from the CFA showed a three-factor structure. Model fit was satisfactory upon revision (CFI = .93, TLI = .91, RMSEA = .09, SRMR = .05). The current findings can be discussed only in the context of the sampled population, contingent upon the revision of the CLBS-1 through multiple iterations with a random population of pre-service teachers to deem this instrument a valid and reliable measure of their critical literacy beliefs. More surveying on and with this teacher population is needed to further explore how critical literacy can be examined in larger-scale studies.

Acknowledgments

My doctoral journey would not have been the same without Dr. Margaret Vaughn. I have known Dr. Vaughn for five years now, and she has been my advisor for the past four years at the Department of Curriculum and Instruction, College of Education, UI. As a Fulbright scholar from North Macedonia, Dr. Vaughn afforded me the opportunity to work on the grant project, Opening Books, Opening Doors in Coeur d' Alene, ID. This opportunity validated my experience as a Fulbright scholar through research into literacy using different qualitative and quantitative methods in K-5 classroom settings.

Dr. Vaughn's research into student agency is important and innovative. She mentored me in research practices, such as triangulating data using several measures—the Developmental Reading Assessment test, CDA district standardized assessments, and student agency as it affects classroom performance. I found that students who were exposed to agency-centered learning demonstrated growth in reading and foundational literacy skills. Because of Dr. Vaughn and the Opening Books, Opening Doors project, I became a vital part of the community fostering a relationship with the Coeur d' Alene's teachers, helping them gain effective literacy strategies that support student and teacher agency.

Under Dr. Vaughn's mentorship, I am exploring agency and visioning in historically marginalized and minoritized communities. With Dr. Vaughn's guidance, I am advancing my research that combines a methodology that facilitates systematic inquiry and innovation for social justice education. My interest in literacy deepened in collaborative projects while working with Dr. Vaughn. The first project was led by Dr. Vaughn and Dr. Jang, a professor of digital literacies at Syracuse University. Our joint research project, "A Systematic Review of Student Agency during Literacy Instruction," examines the impact of student agency in

literacy development across the curriculum. By combining research and teacher education practices, we researched how student agency is supported or impeded during instruction and its effects on students' literacy development. Dr. Vaughn's dedication to improving the literacy development of K-8 education led to another collaborative project with pre-service teachers. In this project, I analyzed qualitative data from a study of pre-service teachers who took part in a critical literacy workshop to experience new perspectives on children's multicultural literature. This project explores best practices of literacy teacher education (LTE) pedagogy in an undergraduate teacher preparation program in a rural region of the United States. Other projects focus on student agency, student visioning, children's literature, and mapping trends in social justice education supported by innovative data gathering methods such as the student agency survey.

I would also like to thank Dr. John Cannon, who mentored me in quantitative instrument design throughout my dissertation research. Under Dr. Cannon's mentorship, I operationalized Lewison et al.'s critical literacy framework as the CLBS-1 instrument and piloted it with a sample of pre-service teachers (N=405). Further, I would like to thank Dr. Allen Kitchel for his support and guidance in the early stages of the survey instrument and obtaining the IRB approval. I would also like to acknowledge Dr. Joshua Premo, whose expertise in Mplus and instrument evaluation was pivotal in assessing the validity of the CLBS-1 instrument. My committee members inspired me to facilitate curiosity, agency, and reflection to advance my literacy teaching and research.

Dedication

I dedicate this dissertation to my parents: my mother, Keti, and my late father, Vladimir. I

would especially like to recognize the supporting role my husband, Marshall, played during

these last five years of research, study, and perseverance.

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CHAPTER 1: INTRODUCTION

Introduction

While the broader field of teacher development for general education is well established, comparatively little is known about critical literacy teacher education preparation. Developing critical literacy beliefs in pre-service teachers is a particularly challenging endeavor (Vasquez et al., 2013). Critical literacy is a lens to make sense of sociopolitical inequities (Freire, 1970). In schooling, critical literacy can be a means to dismantle unequal power distributions presented in texts and more broadly within systems of powers, such as educational institutions (Lewison et al., 2002). Two obstacles have been found to impede the development of critical literacy awareness in pre-service teachers. Firstly, in the apprenticeship of observation phenomenon, Lortie (1975) highlighted that pre-service teachers learn about teaching from their schooling. In this context, beginning teachers are largely exposed to traditional ways of doing schooling and engaging with texts reflective of their own experiences (Smagorinsky & Barnes, 2014). As a result, without being exposed to critical literacy practices and other culturally responsive frameworks in their teacher education programs and practicums, pre-service teachers will more than likely teach the way they were taught as students.

Secondly, teacher education programs are guided by teacher mentoring relationships as evidenced in practicums and other student teaching experiences (Johnson, 2006). However, Cho (2015) stated that enacting critical literacy is impeded in "public school settings [because of] the standardization of curriculum and the test-driven educational environment…[and]… the parental resistance and confusion over the construct of critical literacy" (p. 76). As a result, pre-service teachers may be placed in classrooms where mentorship focuses on

disseminating content rather than enacting critical literacy (Vasquez et al., 2013). For example, both in-service and pre-service teachers in Cho (2015) struggled to conceptualize critical literacy and often described it in relation to higher-order comprehension skills and demonstrated "little prior knowledge of critical literacy" (p. 73). Because in-service teachers struggled to understand critical literacy, mentorship rarely focused on conversations aimed at supporting critical literacy practices. This finding is common as mentorship in practice settings focuses on helping teacher candidates learn academic skills and standards in preparation for being evaluated according to standardized benchmarks for teaching performance (e.g., Teaching Performance Assessment, Praxis exams). As a result of the curricular demands in teacher education programs, teacher education is guided by rigor and fidelity to educational standards (National Council on Teacher Quality [NCTQ], 2020). Consequently, there are minimal opportunities within teacher preparation programs to focus and cultivate dispositions reflective of critically oriented perspectives (Vaughn & Kuby, 2019; Warren, 2018). This lack of attention to critical literacy issues in pre-service teacher education programs is a problem given that the student population is becoming increasingly more diverse and linguistically proliferous (Angel, 2018).

Problem Statement

While research shows that teacher experiences in actual classrooms are the best way to learn effective pedagogy, the successful placement of pre-service teachers in classroom contexts as apprentices with experienced mentor teachers can be challenging to navigate (Vaughn & Saul, 2013; Vaughn et al., 2014). This is especially challenging in rural teacher education programs, where pre-service teacher placement is made difficult due to the small number of schools and teacher mentors (Guerrettaz et al., 2020). With the increasing

pressures placed on student performance on standardized assessments and other state-mandated curricular and assessment needs, the need to understand how pre-service teachers are prepared to serve diverse student populations is essential (Sherfinski et al., 2020).

However, when classrooms where critical literacy practices are not available, teacher candidates learn in isolation (or not at all) about teaching critical literacy (Bishop, 2014; Kunnath & Jackson, 2019; Navarro, 2018; Utt & Tochluk, 2020; Vasquez et al., 2019). For example, Howard (2016) highlighted that White monolingual teachers often maintained inequitable expectations when teaching minoritized students and failed to consider their experiences when teaching literacy. Further, Nganga et al. (2020) found that pre-service teachers felt challenged when asked to adopt a critical literacy perspective in the form of taking action for social justice. In fact, 80% of the pre-service teachers who participated in Nganga's study lacked practical experiences with critical literacy, which persisted until the pre-service teachers took a Social Studies Methods course with underlying critical literacy dimensions. Similarly, Vaughan (2019), in his research of 50 pre-service teachers, found that pre-service teachers did not associate student academic success with sociopolitical factors (e.g., racism, poverty, gender identity discrimination, immigration status, etc.). Moreover, certain pre-service teachers believed that student academic success relied mostly on students' efforts without giving attention to these sociopolitical factors.

Likewise, in Hendrix-Soto and Mosley Wetzel (2019), pre-service teachers took part in conversations about critical literacy and struggled to reflect on their ideological values and beliefs. Furthermore, in Ng (2017), when asked to develop lesson plans with critical literacy practices, pre-service teachers showed an incomplete understanding of critical literacy and hesitated to implement it in the classroom even when offered support. In all, findings from

across the literature on critical literacy echo the need for teacher educators to understand how pre-service teachers form their beliefs about teaching critical literacy.

Statement of Purpose

With the U.S. student population becoming increasingly more diverse (Villenas, 2019), teaching critical literacy is crucial (Cho, 2015; Vasquez et al., 2013). Moreover, the teaching population in the United States is predominantly White and monolingual, while the student population is disproportionally diverse and linguistically proliferous (Angel, 2018). As student diversity increases across the United States, it is crucial to examine pre-service teachers' understandings about critical literacy to support all learners. Because of a lack of prior knowledge and critical experiences with race and ethnicity, White pre-service teachers struggled to conceptualize literacy teaching in underserved communities (Lewison et al., 2002; Vasquez et al., 2013). Vasquez et al. (2013) argued,

> Curriculum is a metaphor for the lives you want everyone to live and the people you want everyone to be. A literacy curriculum has many goals, two of which are disrupting the commonplace and interrogating multiple perspectives. While it is important to talk about each of these goals, it is best to do so based on pre-service and in-service teachers having experienced each of these goals firsthand. This is what we mean by living the curriculum. (p. 51)

Despite this increasing need for understanding equitable and critical literacy practices in the field, there is an absence of evidence-based research surveying pre-service teachers on their beliefs of critical literacy. Although there are existing instruments that examine pre-service teachers' beliefs about efficacy to teach cultural diversity awareness (Henry, 1986; Larke, 1990; Natesan et al., 2011), multicultural awareness, skills, and knowledge (Fraser,

1986; Jones & Walker, 2016), culturally responsive pedagogy (Boon & Lewthwaite, 2015), and social justice and multicultural education (Brown, 2004; Guttmann & Bar-Tal, 1982; Milner et al., 2003; Tran et al., 1994), the field lacks a current and relevant instrument that examines pre-service teachers' critical literacy beliefs.

Given the current climate of politically charged discourse and heightened awareness of human rights and social justice, it is paramount to examine pre-service teachers' beliefs about critical literacy as they are entering increasingly diverse classrooms. Lortie (1975) suggested that pre-service teachers learn about teaching from their own experiences with schooling. Lortie referred to this process as the apprenticeship of observation phenomenon. Moreover, using a quantitative measure, as evidenced in this research, has important implications for teacher education practice and the ways in which teacher education can examine trends and patterns across teacher candidates in their teacher education programs. Quantitative measures are adequate tools to document trends and patterns in capturing pre-service teachers' beliefs about critical literacy now more than ever at a national level (Colson et al., 2017; Peterson-Ahmad et al., 2018). That is, if we can measure and understand how pre-service teachers perceive critical literacy throughout their teacher education coursework, we can work to engage candidates in interrogating their critical literacy beliefs (Vaughn & Kuby, 2019), track them throughout their program, and then embed intentional coursework and mentoring opportunities within teacher preparation.

Research Question

With this focus in mind, this project outlines my dissertation research, centered on the following research question: To what extent does the Critical Literacy Beliefs Survey (CLBS-1) represent the hypothesized dimensions of critical literacy found in the literature?

To answer this question, I employed the Critical Literacy Beliefs Survey (CLBS-1), a 24, 7-point Likert scale, item survey to examine pre-service teachers' beliefs towards critical literacy practices in kindergarten through eighth-grade classrooms. The constructs for the survey were developed from the literature and are outlined in the methods section. In the following sections, I outline the theoretical framework, critical literacy constructs and related literature, data collection procedures, data analysis procedures, and projected timeline for my dissertation.

Positionality of the Researcher

From birth until death, we learn. It is universal that we all learn differently. From a very early age, I found pleasure in the whimsy and wonder of the written word. In school, however, I was taught that learning meant that you read to memorize and retell passages, so reading eventually became a dreaded and laborious process. After school, I would go down to my home basement and rummage through boxes with hidden treasures: my mother's old Yugoslav English textbooks, my father's comic books, my uncle's records, and dusty dictionaries. Later, this became my survival kit to escape the school drudgery. It was not until I met Dorothy McKenna, my foreign language teacher at a language school in Skopje, that I truly become acquainted with the joy of literacy. I was in awe of her ability to write and read in English so effortlessly. Slowly, I learned the sounds, made sense of the syllables, and put words together to form sentences. Learning was no longer a mundane drudgery. It was then that I realized the power of multilingualism and later multiculturalism. My passion for languages grew as I continued to learn Spanish, German, and later in college, Mandarin.

Years after, when I became a K-12 teacher at an international school in Skopje, North Macedonia, I reveled in the fact that I worked with students from over 55 different countries,

and I could use my linguistic resources to get to know my students better. I was overjoyed to work with students as we put the puzzle pieces together, helping them make the transition from children learning to read, to young adults reading to learn. Reading transported my younger students to exciting worlds and times far away from their own. As for the older ones challenged by adolescence, reading becomes therapeutic, an escape or a thrill.

My experiences as a K-12 teacher inspired me to further my education by nurturing another great passion I had, research. Research into critical literacy with a focus on immigration, multiculturalism, and multilingualism became my priority when I came to the United States as a Fulbright scholar. As a Fulbright scholar, I volunteered in the Palouse area, and later in Seattle with Seattle Public Schools and then in Coeur d' Alene, Idaho. During my observations and work with the school communities, I realized that bilingualism and multilingualism were not enacted in the traditional classroom, and often children were taught separately in a classroom for literacy remediation. Immigrant children were rarely using their linguistic resources, and as an immigrant myself, I felt compelled to do research into education with a focus on critical literacy. As an immigrant, I realized that representation is critical within the greater social context of K-12 education in the United States.

Giroux (1993) encourages students to be border crossers to understand others and to create an environment rich in cultural resources. Conversely, classrooms can be crowded, busy, and even threatening places for immigrant children as well as any other minoritized individuals. This pushes me further to work closely with teachers, parents, and administrators to help children use their voices. As a Fulbright scholar, teacher, and researcher, I help promote international education in the local community with underlying global perspectives through my research, teaching, and community engagement. So far, I have been granted the

opportunity to do research in second language literacy, teacher agency, teacher cognition, reading education, and visioning across different sociocultural contexts. This experience, spanning years of teaching in international education with students from over 55 countries and research training both in North Macedonia and in the United States, only furthers my pursuit to help integrate critical literacy practices internationally and across diverse groups of learners.

Theoretical Framework

This study is guided by critical literacy theories (Lewison et al., 2002; Luke, 2000; White & Cooper, 2015). Lewison et al. (2002) conceptualized critical literacy as a framework that examines ideologies, power relationships, and systemic inequalities within education institutions and more broadly in society. To be critically minded educators, pre-service teachers must act upon the world to transform it by harnessing their agency. Pre-service teachers' transformation is contingent upon the reflection on how literacy is contextualized within the K-12 school system (Baysal, 2017; Civitillo, 2018; Umutlu & Kim, 2020).

Critical theory (Freire, 1970) views human learning as a cognitive transformation that is shaped by other people, objects, and activities within a dynamic system of power. As learners of teaching (Mann, 2005), educators appropriate theoretical and practical knowledge through their classroom experiences. Teachers learn to teach by reflecting on their classroom experiences and beliefs about teaching, informed but not dictated by theory (Johnson, 2006). Lewison et al.'s (2002) discuss critical literacy teaching in their framework through which pre-service teachers can interrogate their critical literacy beliefs. This framework consists of the following dimensions: focusing on the sociopolitical, interrogating multiple perspectives, disrupting the commonplace, and taking action for social justice (Lewison et al., 2002).

Critical literacy practices help cultivate academic and ideological perspectives in students of marginalized communities (Morrell, 2015). Participants in Morrell's study transformed themselves into *critical citizens* by leveraging their cultural capital and critical literacy skills. Hence, it is important for future teachers to cultivate critical literacy within the students they will serve (Freire, 1970). For pre-service teachers, critical literacy incorporates a practice of visioning, developing ideologies, and reflecting on histories (Greene, 1998; Vaughn & Kuby, 2019).

Key Concepts in Critical Literacy

The following constructs are derived from across the literature and include focusing on the sociopolitical, interrogating multiple perspectives, disrupting the commonplace, and taking action for social justice (Lewison et al., 2002). Each construct is discussed below, and specification tables (3.1, 3.2, 3.3, 3.4) are presented detailing the development of the survey items from the critical literacy framework in Chapter 3 (Lewison et al., 2002).

Focusing on the Sociopolitical

Focusing on the sociopolitical means to place pre-service teachers in contexts where they can question their own beliefs about master narratives (Lewison et al., 2015; Takaki, 1993). Pre-service teachers could benefit if they embed critical literacy early in their teaching philosophy, starting in their pre-service programs. Spanierman et al. (2011) argued that the explicit instruction of critical literacy practices led to a "cognitive understanding of social inequalities and self-reported multicultural teaching competencies" (p. 458). However, learning about the sociopolitical without an embodied knowledge of systemic inequalities does not automatically translate into pre-service teachers' ideologies.

Opportunities for pre-service teachers to reflect on diversity in rural education contexts are scarce. The lack of critically oriented pedagogy within rural teacher education is a well-established gap and requires curricular reforms to meet the needs of the demographically ever-changing student population in the United States (Anthony-Stevens & Langford, 2020; Sotirovska & Elhess, 2021). Many teacher educators and scholars have begun this important work. For example, Howrey and Whelan-Kim (2009) aimed to develop critical literacy pedagogy in a rural setting with pre-service teachers through multicultural literature. Data revealed that, through multicultural literature supported by critical literacy practices, pre-service teachers fostered a greater understanding of cultures, backgrounds, and beliefs outside of what was familiar to them. In some cases, when teachers transition from pre-service teachers to classroom teachers, the urgency to implement culturally and linguistically diverse teaching wanes over time (Bodur, 2016). One way for pre-service teachers to focus on critical literacy is to broaden their repertoire of literacy artifacts that will deepen their learning and teaching experiences across sociohistorical dimensions (Sotirovska & Kelley, 2020; Vaughn et al., 2021).

To focus on the sociopolitical, pre-service teachers need to examine texts in the curriculum for stereotypes and master narratives. However, some teachers may inadvertently engage in performative activism, such as reading aloud a few well-known Martin Luther King books only during Black History Month and then shortly after reverting to books with exclusively White protagonists (Howard, 2016). Hence, multicultural narratives that depict systemic inequities can often be misunderstood as bereavement stories with moralistic messages. Such interpretation renders characters as personified traits for whom pre-service teachers feel pity and sympathy, emotions that are often short-lived (Vasquez et al., 2013).

Other studies have reported on pre-service teachers' tendencies to stick to the classics and other familiar literature they read as students (Philip et al., 2019). Many teachers across the United States perceive that teaching should be removed from the personal and ideological and focus on disseminating content (Anthony-Stevens & Langford, 2020). Teaching is a non-neutral craft enacted in a sociopolitical system where pre-service teachers can act in solidarity with those displaced within the system. Focusing on the sociopolitical allows pre-service teachers to broaden their selfhoods and focus their teaching on being in the world and with others (Botelho & Rudman, 2009).

Interrogating Multiple Perspectives

Interrogating multiple perspectives is a dimension that acknowledges multiple lenses through which people see and understand the world. Master narratives perpetuate the status quo by which some are heard, while others are silenced (Takaki, 1993). Recent statistics revealed that children's books feature more animals as the protagonists than characters of color, including Black, Latinx, Asian, and Native American representation (Cooperative Children's Book Center [CCBC], 2019). White characters comprised 50% of the characters in children's books, while 27% portrayed animal characters or "other." The remaining 23% were shared among Black/African American characters with 10%, Asian Pacific Islander/Asian Pacific American characters with 7%, Latinx characters with 5%, and American Indian/First Nations characters with 1% (CCBC, 2019). Without human representation in the most prevalent literacy artifacts in the elementary classroom, picture books, examining multiple perspectives in both K-12 classrooms and teacher education classrooms will remain encumbered. When individuals adopt multiple perspectives, they arrive at a more nuanced

understanding of themselves and others (Nganga, 2020; Weuffen et al., 2019), especially of the perspectives of groups and individuals affected by sociopolitical factors.

Further, Brooks (2009) discussed critical race theory in the K-12 classroom as applying a different lens to classroom literature. Brooks analyzed *The Land* (Taylor, 2016) through the lens of critical race theory to find themes in Coretta Scott King award-winning books. Through counter-narrative storytelling, the author identified themes that give visibility to African American family histories and their experiences with racism and systemic injustice. Moreover, two studies have surveyed how professors and instructors in pre-service teacher education programs are teaching young adult multicultural literature (Gill, 2000; Hipple et al., 1997). In both studies, researchers surveyed university instructors on course design, student self-selection, teaching methodology, the implementation of core novels, genres, and teaching strategies. Cromer's findings revealed that professors used "core novels" in Young Adult Literature (YAL) courses that were predominantly written by White males. The survey results demonstrated that only two of the most common novels were authored by people of color: Mildred Taylor's *Roll of Thunder Hear My Cry* (1976) and Walter Dean Myers' *Fallen Angels* (1988). Gill replicated Cromer's study to find that professors maintained a balance of diverse authors in terms of gender identity and background and emphasized authors of color in their core courses. These studies that address and investigate critical literacy beliefs have not been replicated with pre-service teachers. Vasquez et al. (2019) define critical literacy as a frame for enacting social justice that elucidates inequitable practices. In so doing, educators can help students contextualize events inclusive of the past and present context, cultivating nuanced perspectives on our social world (Botelho & Rudman, 2009).

Disrupting the Commonplace

Disrupting the commonplace is acting with agency to seek more equitable and just narratives. For example, in Lopez (2011), a teacher of color disrupted the commonplace to include "a variety of forms, comprised to raise cross-cultural awareness through culturally relevant pedagogy" (Lopez, 2011, p. 82). Such powerful acts of agency are laden with challenges, especially in schools with culturally and linguistically homogeneous populations. In that, the teacher feared that students might attribute her pedagogy to the fact that "she is Black," as she also feared that some students might not see the "relevance of critical literacy to their lives and learning" (p. 88). Teachers must disrupt the status quo, but to do so in high stakes, they must be risk-takers within the literacy curriculum.

Reimagining teachers' roles from disseminators of content to agents of social change leads to their growth, transformation, and empowerment (Lewison et al., 2002). Disrupting the commonplace centers on the inquiry about how minoritized and marginalized groups are constructed in dominant literacies. Dominant narratives often depict people of color's histories through a lens of oppression and alienation devoid of their identities and cultures (Takaki, 1993). Taylor (1998) invites educators to embrace the reality of racism, "my stories might not be 'politically correct' so there will be those who will be offended, but as we all know, racism is offensive. It is not polite, and it is full of pain" (par 7-8). It is to be expected that the use of critical literacy practices in the mainstream classroom will cause discomfort that will lead to learning.

Taking Action for Social Justice

Taking action for social justice focuses on teaching curricula that serve the broader community by promoting understanding, acceptance, and growth. Critical literacy affords pre-

service teachers with ways to develop ideologies in line with social justice curricula (Lewison et al., 2002; Morrell, 2015). This form of reflective practice allows ideologies to become visible through discourse. Thus, a closer analysis of pre-service teachers' discourses across all four critical literacy dimensions is necessary for examining their beliefs on equity and equality in education. Discourse underlies the sociopolitical functions of language with intentionality and purpose in the classroom (Gee, 2010).

When educators pity marginalized or minoritized students, they further reinforce a privileged position (Assaf & López, 2015). Warren (2018) defined empathy as "adopting the social perspectives of others as an act and process of knowing" (p. 171). For example, bilingual students in certain rural areas in the Southwest struggled to make authentic connections to the curricula being taught as well as experienced difficulties in connecting to their teachers and academic community (Goulah & Soltero, 2015). Similarly, Godina (2004) found that White K-12 teachers in the Midwest could not connect to bilingual students and struggled to support them in the classroom. Demographically diverse students have historically been underrepresented in the general education curricula (Villegas & Lucas, 2002). In a study by Spezzini et al. (2015), in-service teachers in rural Alabama gained a deeper understanding of the needs of their linguistically diverse students, once they experienced critical literacy pedagogy.

With the increasing racial, ethnic, and demographic diversity changing the linguistic landscape of the United States, the need to train teachers to meet the needs of all students has never been more urgent (Paciotto & Delaney-Barmann, 2011). Pre-service education programs must prepare teachers for a culturally and linguistically diverse population (Arnold et al., 2005), yet many programs do not place focus on critical literacy (Daniel, 2016;

Freeman, 2002; Freeman & Freeman, 2014; Goulah & Soltero, 2015; Samuels et al., 2017). In summary, Lewison and colleagues' (2002) critical literacy dimensions provide a framework to examine pre-service teachers' critical literacy beliefs.

Summary

The findings from this study provide insight into how teacher educators and pre-service teachers can bridge social justice education with literacy practices to meet the needs of K-8 diverse youth. I created an instrument to broadly address the pre-service teacher population and their beliefs about critical literacy. In this chapter, I documented the development of the survey items using the critical literacy framework conceptualized by Lewison et al. (2002). The four critical literacy dimensions are discussed briefly below.

In focusing on the sociopolitical, language and power are connected. Hence, the survey questions for this dimension focused on pre-service teachers' need to develop the language of critique and analyze knowledge as a historical product (Shannon, 1995).

Interrogating multiple points of view centers on developing empathy and being able to examine texts from different perspectives. The survey questions for this dimension focused on the following concepts: fostering empathy, making systemic differences visible, and examining histories both visible and hidden.

Disrupting the commonplace entails questioning unequal power relationships within social structures. The survey questions for this dimension included examining sociopolitical systems, questioning dominant ideologies, and situated cognition.

Taking action involves acting for social justice towards equality. The survey questions for this dimension focused on exploring pre-service teachers' visions of praxis and enacting said visions within the scope of imagined reflective and critical literacy practices.

This study sought to operationalize these four dimensions as a model for pre-service teachers' critical literacy development. The operationalization of these dimensions through the development of the CLBS-1 instrument constitutes a necessary step to developing pre-service teachers' beliefs about critical literacy.

CHAPTER 2: LITERATURE REVIEW

Introduction

In teacher education, knowledge does not automatically transfer from expert to novice but is appropriated through "experience, reflection and collaboration" (Mann, 2005, p. 106). McAllister and Irvine (2002) maintain that as pre-service teachers practice self-awareness, they also develop empathy as part of their pedagogical learning. Giroux (1988) refers to teacher mentors as "transformative intellectuals" who provide pre-service teachers with tools to connect theory and practice. As a result, the role of learning from in-class experiences in teacher education courses cannot be undervalued (Lantolf, 2000).

In schools, opportunities to engage in critical reflective work can be a challenge given a variety of institutional and societal demands (Luke, 2018). For example, Sherfinski et al. (2020) reported that pre-service teachers often feel underprepared to meet state-directed curricular and assessment objectives, necessitating that students score high on assessment tests and develop skills to meet the demands of the robust curricula. With the ever-increasing pressures in teacher preparation relating to the teaching standards, practicum, and schooling aims, teacher educators have limited opportunities to introduce pre-service teachers to critical literacy. Thus, coursework is essential in supporting and developing critical literacy knowledge in pre-service teacher candidates.

However, there has been limited research on how to bridge the gap between teacher education classrooms and student practicums in the form of pedagogical praxis (Jun, 2016). Pedagogical praxis is conceptualized as "reflection and action directed at the structures to be transformed" (Freire, 1970, p. 126). Praxis allows for pre-service teachers to embody knowledge, lessons, and skills and achieve transformation.

Critical literacy praxis destigmatizes individuals by empowering them with agency and awareness by which they can evaluate and change their circumstances, leading to liberation (Shefer et al., 2018). (Shefer et al., 2018). Critical literacy is a framework for evaluating knowledge, perspective, and ideology in systems of power (such as educational institutions).

Evaluating
Knowledge

**Critical
Literacy
Pedagogical
Practice
Framework**

Evaluating
Ideology

Evaluating
Perspective
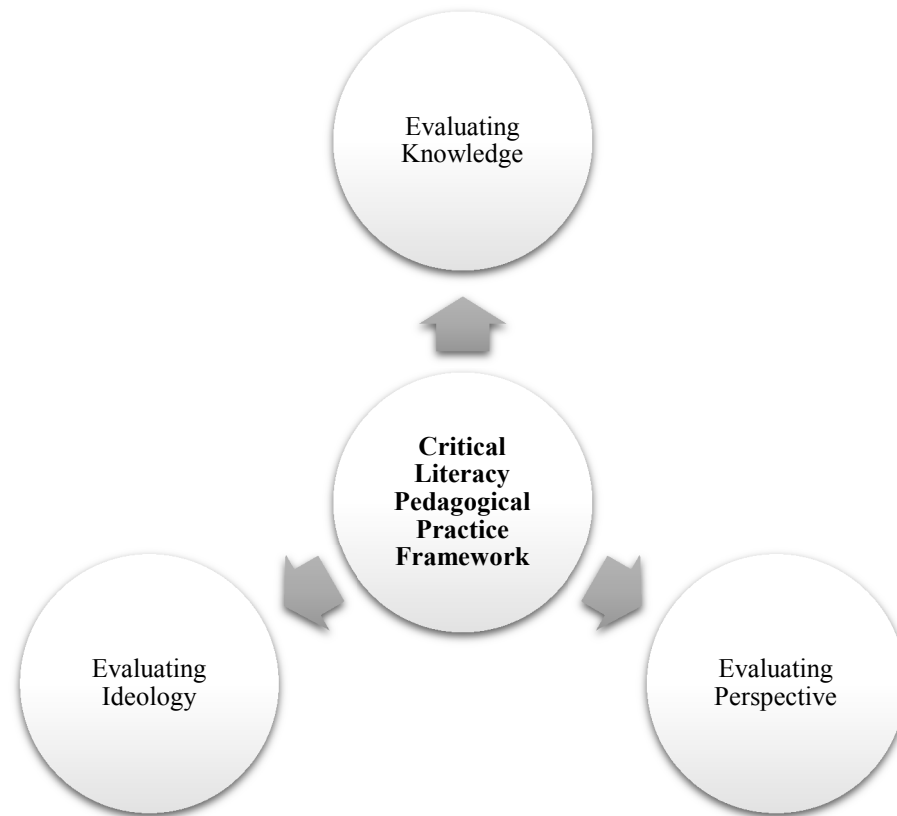
Figure 2. 1. Illustration of the Critical Literacy Pedagogical Practice Framework

Enacting pedagogical praxis is particularly challenging in many teacher education programs. For example, in large rural universities in the United States that house many pre-service teacher education programs, the logistical placement of pre-service teachers in actual classrooms for their practicums can be difficult due to the small number of schools or the lack of critical literacy teaching in some remote areas (Cho et al., 2012; Tinkler & Tinkler, 2013). As Vaughn and Saul (2013) argued,

Unlike other larger urban school districts, due to budget cuts and teacher retention,

rural schools like those in which these teachers taught that are small and located in

remote, rural areas of the country, may be more likely to cancel courses and programs

that are desperately needed for students' future success. (p. 5)

Similarly, the challenge in urban areas is just as complex. Urban schools in many

areas across the United States are affected by systemic inequities, which make schooling

difficult for minoritized and marginalized students (Schwartz et al., 2017). For example,

Kunesh and Noltemeyer (2019) found that pre-service teachers demonstrated an implicit and

unconscious bias when responding to vignettes about Black male students. This bias made the

teachers more alert to Black students' behavior and prompted an unfavorable interpretation of

their actions in the classroom. Overall, pre-service teachers expressed apprehension in

working in urban schools. In Weber (2017), one pre-service teacher shared,

At the beginning of the semester, I was definitely a little apprehensive about working

with these students, mostly because I was worried they were going to be difficult to

manage. A lot of people have stereotypes about urban schools, getting a lot of negative

ideas from the media. (p. 30)

Weber found a lack of connection between practicum experiences in urban schools

and teacher preparation courses. As a result, when classrooms where critical literacy practices

are not available, teacher candidates learn about teaching in a vacuum devoid of authentic

teaching settings (Mann, 2005). Accordingly, the need to understand how pre-service teachers

learn about critical literacy in the teacher education classroom and the beliefs they cultivate as

a result of teacher preparation courses is necessary.

Pre-service Teachers Experiences with Critical Literacy

Models of Teacher Learning

There is ample scholarship from the general education literature on models of teacher learning (Pinter et al., 2020); however, these models do not necessarily differentiate between critical thinking and critical literacy skills (Ellerbrock et al., 2016). The pedagogical expertise required to teach critical literacy differs in important ways from that of critical thinking skills in that critical literacy shapes educators' ideologies (Bishop, 2014). For example, models of teacher learning emphasize apprenticeship with teacher mentors in authentic classroom scenarios (Piwowar et al., 2018), participatory praxis in the teacher education classroom (Lykes et al., 2018), and apprenticeship of observation phenomenon (Lortie, 1975). In the following section, models of teacher education that support critical literacy are discussed and exemplified.

Authentic Classroom Scenarios

Authentic classroom scenarios emphasize the link between pre-service teacher education and diverse teaching experiences to strengthen pedagogical praxis. As showcased in Weber (2017), pre-service teachers once immersed in a real-life teaching scenario (through apprenticeships with teachers in urban school settings) began to dispel their pre-conceived notions about urban schools. Along with teacher mentoring through apprenticeships, pre-service teachers can garner skills relevant to the contexts in which they will enact classroom pedagogy. For example, Naidoo and Wagner (2020) illustrated the benefits of teacher mentoring with social justice underpinnings in shaping pre-service teachers' beliefs about teaching in underserved communities. By helping pre-service teachers make sense of teaching in disadvantaged contexts, teacher mentors cultivated awareness among pre-service teachers

of systemic factors that influence minoritized and marginalized students. Such apprenticeships with experienced teacher mentors established positive associations between pre-service teachers' visions of teaching and practicums in underserved schools. Similarly, in Schiera (2019), pre-service teachers envisioned their pedagogical praxis, grappled with the challenges of enacting their visions, and reflected on pedagogy in authentic contexts as novice practitioners. Schiera emphasized the importance of leveraging the knowledge of social justice pedagogy from the teacher education classroom into K-12 contexts of teacher practice.

Participatory Praxis

Participatory praxis is central to understanding teacher development and "captures how theory and practice inform one another and how this transformative process informs teachers' work" (Johnson, 2006, p. 240). Through participatory praxis, pre-service teachers bridge the gap between pedagogical knowledge and practice with underlying affective dimensions. Arnold and Mundy (2020) stressed the importance of "connecting the theorizing of the pre-service teachers and the processes linked to their praxis" (p. 11). The researchers observed that when pre-service teachers theorized their pedagogical experiences, they could articulate their participatory praxis better. The pre-service teachers' "perspectives provided a stance for developing practice" (Arnold & Mundy, 2020, p. 11) through participation and reflection on the pedagogical processes observed in the classroom. Further, Arnold (2019) added that pre-service teachers leveraged their praxis experiences to understand their identity constructions, specifically their teacher identity. In Enright et al. (2017), pre-service teachers were positioned as pedagogical consultants by providing curricular suggestions and reflecting on teaching practices. Pre-service teachers develop pedagogical praxis by being positioned as

decision-makers in the teacher education classroom and the schools, where they engage in practicums.

The Apprenticeship of Observation Phenomenon

The apprenticeship of observation phenomenon underlines that, through reflective practice, teacher candidates can counter ways of experiencing schooling aligned with their visions of classroom pedagogy. Vaughn and Kuby (2019) saw reflective practice as an integral part of the teacher education coursework and underscored important ways of how pre-service teachers can engage in reflective practice to interrogate their "visions and their personal ideologies and histories" (p. 1). As pre-service teachers learn by observing and participating in classroom teaching (Lortie, 1975), reflection can be a powerful tool in how they internalize pedagogy. Novice teachers' classroom pedagogies are shaped by how they were taught as children, as pre-service teachers in their teacher preparation programs, and as novice educators in their current classroom contexts by more experienced colleagues. Gray (2020) emphasized the need for continued mentorship of teacher candidates as they assume classroom positions by teacher education programs to solidify the learned pedagogical praxis. In the same way, pre-service teachers were predisposed by their apprenticeship of observation to adopt or challenge their perceptions of teaching. Hence, Cancino et al. (2020) argued that pre-service teachers' reflections on their K-12 schooling experiences are integral to their teaching choices, decisions, and perspectives.

Although these models (authentic classroom scenarios, participatory praxis, and apprenticeship of observation phenomenon) are the goal by which teacher preparation programs orient their coursework (Darling-Hammond, 2006), White monolingual pre-service teachers still grapple to understand the experiences of minoritized and marginalized students

(Weber, 2017), and in so doing, many challenges occur. For example, pre-service teachers who followed a sequence of literacy tasks designed for English Language Learners (ELLs) became aware of the challenges ELLs experience (Guerrettaz et al., 2020). Pre-service teachers struggled to keep up with the language tasks, despite English being their mother tongue. Pre-service teachers acknowledged the effort it takes to navigate multiple literacies in the classroom and the importance of teaching with affective dimensions.

Thus, reflective practice, embedded in teacher coursework, is essential in fostering critically oriented pre-service teachers. However, many educators grapple with teaching content inclusive of critical literacy practices (Bishop, 2014, Santamaría Graff et al., 2020; Sinclair & Powell, 2020). Giselsson (2020) encourages teacher educators to differentiate between critical thinking and critical pedagogy in pre-service teacher education because when conflated, critical thinking as a core skill and critical literacy as a pedagogical framework can be mutually exclusive. Giselsson (2020) elaborates,

> Critical literacy and critical thinking are different concepts but are often viewed as synonymous. Whether critical literacy and critical thinking are indeed synonymous is important, as it is not only related to the debate over how critical thinking should be taught, but also to the wider debate over the definition of critical thinking itself. (p. 1)

In Lee (2011), pre-service teachers conflated critical literacy with higher-order comprehension skills, such as critical thinking. The pre-service teachers in this study largely perceived schooling as an experience removed of sociopolitical factors. Lee (2011) explains,

> Critical literacy practices differ from critical thinking skills in that the former are set in a sociopolitical context oriented toward identifying unequal power relationships and serving social justice. […] Critical literacy takes a step further to question or

problematize, for example, gender biases embedded in the article and investigate them from multiple perspectives. By uncovering such biases that are situated in a sociopolitical context, we become critically informed and can even take actions against them. Therefore, while critical thinking and critical literacy overlap in certain aspects, the latter should not be reduced to the former. (p. 97)

Pre-service teachers learn about critical literacy in authentic contexts supported by participatory praxis. Also, pre-service teachers theorize their pedagogical praxis by apprenticing with teacher educators and K-12 teacher mentors. In this way, pre-service educators can conceive critical literacy as an ideological predisposition rather than a technical skill.

Critical Literacy and Teacher Education

Research in teacher education demonstrates the struggle that many programs face as they work to embed their programs within a critical literacy orientation (Vasquez et al., 2013). For example, Vasquez and colleagues (2013) found that pre-service teachers place little emphasis on understanding critical literacy, even as they take classroom positions. Similarly, in developing a multicultural education framework, Gustine (2018) examined the role of critical literacy practices in pre-service education courses. The survey results from English language teachers revealed that the implementation of critical literacy varied across teachers. Also, the teachers lacked the necessary knowledge and experience to differentiate critical literacy approaches from other methods of teaching English.

Coupled with the limited implementation of critical literacy in pre-service education programs (Vasquez et al., 2013), research showed that in-service teachers also struggle to conceptualize critical literacy in the classroom (Ketter & Lewis, 2001; Stallworth et al.,

2006). Moreover, Karacabey et al. (2019) surveyed 248 language teachers who worked with refugees on their attitudes towards critical multicultural education. While the study presented overall positive attitudes towards implementing critical pedagogical practices in their teaching, the researchers stressed the importance of surveying and developing teaching methods in pre-service teacher education according to critical multicultural practices.

Although some pre-service teachers are invested in social justice issues, they all too often lack exposure to lessons in the curriculum on race or other critical topics, further exacerbating the divide between pedagogical praxis in critical literacy and content learning (Xu & Brown, 2016). This is a common phenomenon across the literature. For example, while pre-service teachers were ready and eager to implement pedagogical practices learned in the teacher education classroom, pre-service teachers lacked opportunities to enact these skills during their practicum experiences at schools (Tican & Deniz, 2019). Researchers have found that in addition to these obstacles, pre-service teachers need to learn the step-by-step methodology (such as developing lessons) that go with the learning and teaching of critical literacy (Vasquez et al., 2013). For instance, an example of the said practice was found in Kwong (2020) who exemplified a systematic approach to developing a social justice curriculum through "(1) reflective reading notes; (2) critical reflection paper; (3) brief lecture and experiential class activities and discussion; (4) collaborative group presentations and role-plays; and (5) cultural competency plan" (p. 184). Kwong surveyed 36 students to explore their beliefs on social justice principles. Next, Kwong exposed students to reflective practice, community engagements, and immersive experiences coupled with carefully identified pedagogical practices. Correspondingly, Crawford-Garrett et al. (2020) observed that participating in a collaborative apprenticeship program with critical literacy as a methodology

helped to cultivate a locally situated contextual praxis among the teacher participants.

Vasquez et al. (2019) conclude,

> Critical literacy as a way of being and doing in the world contributes to creating
>
> spaces to take on these sorts of issues, engaging learners in powerful and pleasurable
>
> ways and creating spaces to achieve a better life for all. (p. 308)

Much like these studies suggest, there needs to be a systemic effort to implement

lessons on critical topics within teacher education programs with underlying pedagogical

praxis. White middle-class teachers represent 82% (U.S. Department of Education, 2016) of

the teaching workforce serving a culturally, racially, and linguistically proliferous population

of students. Hence, as an analytical framework, critical literacy is relevant to making sense of

student experiences with schooling and as a tool for reflective practice (Vasquez et al., 2019).

Critical Literacy Research

Historically, one challenge in many literacy degree programs relates to the curricular

and epistemological divide between critical literacy theories on the one hand and expertise in

implementing the said theories in practice on the other (Vasquez et al., 2013). Since the

1990s, the field of multicultural pedagogy has emerged and grown to include inquiry into the

knowledge base of K-12 educators in diverse K-12 settings (Freeman, 2002; Freeman &

Johnson, 2014); questions of teacher identity (Beauchamp & Thomas, 2009; McDermott,

2002; Reeves, 2018; Vaughn & Faircloth, 2011); and best practices of multicultural education

(Bishop, 2014; Garmon, 2005; Ladson-Billings, 1995). Understanding how pre-service

teachers think about applying critical literacy in their future classrooms is essential given the

current climate of racialized tensions. *Critical literacy* is a construct that illuminates unjust

practices in systems of power, such as education. Hence, it aims to demystify whose voice is heard and whose is silenced (Botelho & Rudman, 2009).

Even though critical literacy is crucial in today's educational landscape, there is a lack of explicit teaching practices of critical literacy in pre-service teacher education. Little is known about how teacher educators can apply quantitative measures to critical literacy teaching with larger groups of pre-service teachers (Vasquez et al., 2013). In fact, few documented quantitative studies surveyed pre-service teachers on critical literacy. However, some studies have been conducted that provide insight into the importance of using quantitative measures to understand teachers' perspectives on critical literacy. For example, Rhodes (2017) developed a culturally responsive teaching scale that measured the likelihood of educators engaging in the teaching of critical and affective pedagogy. Using a 17-item online survey, Rhodes established patterns of teaching praxis suitable for adult English language classrooms. The measure examined four dimensions of critical and affective pedagogy, including "establishing inclusion, developing attitude, enhancing meaning, and engendering competence" (p. 46). The scale showed that most of the surveyed educators regularly employed culturally responsive pedagogy and generated positive correlations with multicultural knowledge and teaching skills. Still, instruments dedicated to surveying educators in their formative years of teaching development are rare.

Quantitative measures can support pre-service teachers' understandings of sociopolitical contexts and literacy teaching throughout teacher preparation (Rhodes, 2017). Along with these measures, pre-service teachers need authentic contexts to experience critical literacy practices. However, authentic contexts for pre-service teachers to experience critical literacy practices are hard to come by; and it is up to teacher educators to emulate scenarios in

the classroom to promote critical literacy. In Iwai (2017), pre-service teachers were surveyed on their cultural diversity perceptions using the Cultural Diversity Awareness Inventory (CDAI) (Henry, 1986). Developed by Henry (1986) and modified by Larke (1990), the 28-item self-reporting instrument measures user perceptions, beliefs, and behaviors on diversity constructs. For example, CDAI can measure teacher readiness to teach students from culturally diverse backgrounds.

Larke (1990), who revised the CDAI survey, adhered to the following five dimensions developed by Banks (1997): (a) cultural awareness, (b) culturally diverse family, (c) cross-cultural communication, (d) assessment, and (e) multicultural environment. This inventory examined pre-service teachers' cognizance of their attitudes, beliefs, and behaviors regarding cultural diversity. The researcher conducted interviews to inform future development of courses centering on multicultural literature and Culturally Responsive Pedagogy (CRP). This integrated method, the survey and the interviews, helped Iwai identify knowledge gaps in pre-service teacher education about culturally responsive teaching and outline a step-by-step methodological approach for social justice pedagogy. Following McAllister and Irvine's (2000) summary of culturally responsive practices, Abacioglu et al. (2020) highlighted four directions for her research, including the implementation of multicultural literature lessons, providing opportunities for reflection, modeling culturally responsive pedagogy, and using evidence-based research with culturally responsive models. The complete CRP framework includes (McAllister & Irvine, 2000, p. 20):

- implementation of multicultural courses based on the pedagogy of process models
- providing opportunities for reflection
- providing opportunities for interaction with diverse populations

- modeling culturally responsive pedagogy

- providing professional development to improve skills

- using evidence-based research with culturally responsive models

The goal of this survey was to examine "teachers' multicultural attitudes, and their perspective taking abilities" (Abacioglu et al., 2020, p. 739), along with critical pedagogical practices to increase pre-service teachers' awareness of critically evaluating classroom literature. The researchers aimed to determine if previous findings using the same instrument, CDAI, can be generalized to a 143 sample of elementary school teachers to inform future teaching practices and professional development. The survey results confirmed that "perspective taking was a stronger predictor for both aspects of CRT" (p. 745), emphasizing the necessity to implement critical literacy pedagogy to include objectives that are culturally relevant to students.

Arsal (2019) implemented a critical multicultural framework in a teacher education program. By introducing pre-service teachers to critical literacy, the pre-service teachers in this study expressed greater confidence in enacting critical multicultural education than the control group who did not attend the program. When pre-service teachers engaged in mediation with literacy artifacts, their understanding of ways to implement social topics in their teaching expanded, and their repertoire of resources increased. There are a few documented qualitative studies that surveyed pre-service teachers on critical literacy as a participatory praxis. For example, Boyd and Darragh (2019) explored how pre-service teachers conceptualized taking action for social justice on their university campuses through examples in young adult literature. The study revealed that taking action with social impact positively affected pre-service teachers' sense of self and community and enabled them to

develop a knowledge base of critical literacies. Similarly, Peres (2019) explored how reading

aloud children's literature with Brazilian pre-service teachers followed by a discussion and

written reflections transformed the children's books into a "lived experience, not only a

theoretical discussion" (p. 95). Peres explained that this critical literacy model allowed pre-

service teachers to experience different sociability through books. Critical literacy is a

necessary part of teaching practice because it opens possibilities to construct books as more

than literacy artifacts but as tools to broaden students' world in an aesthetic, moralistic, and

political sense. Han et al. (2020) documented how teacher educators transformed an early

childhood teacher education program to serve the local urban community and meet the

accreditation requirements and state standards. The study revealed that pre-service teachers

felt disconnected from their practicum experiences because of a lack of preparedness and

exposure to targeted instruction fit for an urban education landscape. Data from Han et al.

(2020) confirm how necessary explicit and systematic teaching of critical literacy is for the

current pre-service teacher serving a diverse student population.

In summary, pre-service teachers find critical literacy beneficial in many ways: a) it

encourages students to think critically, b) it enhances student understanding of critical issues

in their community, and c) it acquaints students with different perspectives on social issues

(Civitillo et al., 2018; Edwards-Groves & Gray, 2008; Peterson-Ahmad et al., 2018; Vasquez

et al., 2019). Despite its perceived benefits, pre-service teachers were reluctant to teach

critical literacy in the classroom because of parental backlash, time management while having

to teach according to district standards and curricula, and concerns about overstepping

boundaries (Han et al., 2017; Han et al., 2020). For example, in Norris et al. (2012), some pre-

service teachers expressed concerns over the appropriateness of critical literacy practices

when teaching young children. Pre-service teachers' visions of teaching often are based on the apprenticeship of observation phenomenon (Lortie, 1975) and can be evaluated through a critical literacy lens, which is why teacher education should examine:

> Classical models of oppression within society, such as those based on race/ethnicity, gender, religion, nationality, sexual orientation, class, species or disability do not act independently of one another; instead, these forms of oppression interrelate creating a system of oppression that reflects the 'intersection' of multiple forms of discrimination … (Ritzer, 2009, p. 1)

Critical literacy opens possibilities by restructuring curricula to open spaces for examining multiple perspectives, evaluating dominant ideologies, and cultivating diverse communities that can improve students' experiences, academic outcomes, and futures. Through critical literacy practices, pre-service teachers cognize individual and collective identities, counter-storytelling, and hidden histories.

Barriers to Critical Literacy Practices in Teacher Education

The barriers to enacting critical literacy practices in teacher education include: a) the mindset of privilege and ideological differences, b) bias towards people affected by poverty and other socioeconomic plights, and c) avoidance of confronting systems of power, such as the educational institutions. In the following section, each barrier is discussed.

The Mindset of Privilege and Ideological Differences

White monolingual pre-service teachers often assume classroom positions with a privileged ideology that can create reductive stereotypes and associations (for example, associating immigration status with future academic success) (Bacon, 2020). Vittrup (2016) discovered that pre-service teachers were reluctant to discuss race in the classroom and

thought it was the parents' responsibility. Vittrup problematizes the lack of critical literacy approaches in the K-12 curriculum and explains,

> Since individual teachers do not have the agency to change school and district policies, they may perceive it as a futile endeavor to try to change anything at all. Teachers do have the ability to select specific lessons and content within the curriculum guidelines, as well as specific activities and discussions, and thus there are many opportunities to incorporate messages about race, diversity, and anti-bias. (p. 40)

The researcher then calls for a curricular change in how students are educated on social justice topics, especially racial injustices, and echoes the following,

> Even young children are aware of race and start absorbing messages from their environment regarding racial attributes, values, and stereotypes. Therefore, teachers of young children should forego the assumption that the children are unable to understand race and racism and instead engage them in developmentally appropriate conversations on the topic. Ignoring children's comments or questions only encourages stereotypes and biases to remain unchanged. (p. 41)

Crowley (2019a) reported that some White teachers overlook systemic factors as root causes for students' academic struggles in urban schools. In this study, three White male teachers reflected on their White privilege to understand how dominant group ideology promotes racial inequality by overlooking systemic factors affecting students of color. Crowley (2019b) proposes "a racial pedagogy that connects the personal and structural elements of race, that centers White complicity rather than White privilege, and that encourages teachers to capitalize upon the teachable racial moments that occur in classrooms" (p. 195).

Bias towards People Affected by Poverty and Other Socioeconomic Plights

Teachers in Nayak and Biswal (2020) grappled with the dichotomy of poverty (poverty by choice or chance) and its effects on students' academic performance and success. The researchers argued that poverty is inextricably linked to education. To eradicate poverty, educational institutions need to acknowledge systemic factors that shape students' experiences with schooling. In Bazemore-Bertrand and Handsfield (2019), pre-service teachers had stereotypical conceptions about underserved schools by conflating social class and race. Such attitudes reveal deep-seated fears and biases that teacher education programs must address. Bazemore-Bertrand and Handsfield (2019) countered deficit perspectives in pre-service teachers by placing teachers in underserved schools and preparing them to engage intersectionally with race and social class.

Similarly, in a sequential mixed-methods study, Souto-Manning (2019) detailed the biggest obstacles to teaching critical literacy in teacher education. Souto-Manning found that teachers were not being placed in schools serving minoritized children of color, thereby perpetuating a negative stigma over what is "quality" education in teacher placement programs. Current teacher placement is more reflective of a racial and classist ideology pervasive in teacher education that renders schools as good or bad based on whom they serve. Therefore, Souto-Manning advocates for a transitional paradigm that shifts from "theorizing justice to engaging with justice as praxis" (p. 104). For this reason, teacher placement plays an integral role in this ideological shift in pre-service teachers from thinking about social justice to taking action for social justice.

Avoidance of Confronting Systems of Power

With the focus of many teacher preparation programs on content mastering, pre-service teachers are rarely prompted to interrogate their teaching ideologies (Leath et al., 2019). Representing multiple perspectives and disrupting the commonplace, as dimensions of critical literacy, are often enacted in the teacher education classroom through the reading and analysis of multicultural literature (Bishop, 2014; Botelho & Rudman, 2009; Cho, 2015; Iwai, 2017; Sotirovska & Kelley, 2020). In K-12 schools, however, in-service teachers often referenced literature they were taught as students, as the literature they were currently teaching. Other teachers "did not see the relevance of updating reading lists and teaching from multicultural perspectives [and some] listed titles they considered multicultural that were written from a European perspective and represented diversity only in terms of chronology" (Stallworth et al., 2006, p. 487). This is a problem because when pre-service teachers apprentice with teacher mentors at schools, they are expected to enact theory through practice. In the above-mentioned studies, teachers avoided confronting systems of power in which they operate. Pre-service teachers as teachers-in-the-making are often provided with few (if at all) opportunities to make curricular decisions, offer suggestions, and disrupt the commonplace during their practicums, despite being taught to do so at university. By apprenticing with teacher mentors that lack diverse outlooks on teaching, pre-service teachers risk enacting the same pedagogical practices in their own classrooms. Such cycles need to be broken with inclusive pedagogy modeled by teacher educators and mentors in teacher education programs and practicums. More surveying of pre-service teachers, professors, and administrators is warranted to understand why teachers feel underprepared to teach critical literacy.

Hence, Janks (2017) echoes the importance of arriving at a common understanding of critical literacy in constructing the world through texts. The author calls for a broadening of the lens that readers use to evaluate texts critically into practice. Janks argues that in the field of education, scholars often assume a shared understanding of concepts such as social justice, which further problematizes how critical literacy is enacted in the classroom across different systems of beliefs, attitudes, and communities. Morrell (2015) maintains that critical literacy is tied to larger social implications for democratizing education. For example, Poulus and Exley (2018) explored the transformative impact of critical literacy practices among culturally diverse students who examined unequal power relations in texts. In a similar vein, Souto-Manning (2017) suggested that by drawing on critical literacy, pre-service teachers can use counter-narratives to dismantle unequal power dynamics that portray diversities through a deficit lens in early childhood education. Following this, McLaughlin and DeVoogd (2020) urge teachers to adopt critical expressionism in their classrooms by adopting a critical lens when evaluating texts leading to a heightened literacy awareness.

Many teacher educators are working to transform teacher education curricula to be inclusive and reflective of the world and society. According to Gay (2002), "One specific way to begin this curriculum transformation process is to teach pre-service (and in-service) teachers how to do deep cultural analyses of textbooks and other instructional materials, revise them for better representations of culturally diversity [...]" (p. 108). Botelho and Rudman (2009) encourage critical analysis of classroom texts to consider uncomfortable topics such as "dehumanization, collision, resistance, and agency as they are enacted among characters" (p. 269). They urge teachers to engage in collaborative practices that "allow for histories and discourses to bump against each other" (p. 269).

Barriers to the enactment of critical literacy encompass a) the mindset of privilege and ideological differences, b) bias towards people affected by poverty and other socioeconomic plights, and c) avoidance of confronting systems of power (such as the educational institutions). Critical literacy is a tool to counter ideological barriers by addressing the bias pre-service teachers hold when assuming classroom positions. In this way, pre-service teachers can become agents of change in systems with unequal power distribution (such as schools).

Identifying the Critical Literacy Gap in Teacher Education

There are gaps in teacher education that have made the implementation of critical literacy challenging in teacher education programs. These gaps include: 1) taking action for social justice as praxis, 2) lack of instruments to measure critical literacy (especially with pre-service teacher population), and 3) the pedagogical practices that support critical literacy praxis are discussed below.

Taking Action for Social Justice as Praxis

Taking action for social justice is a dimension of critical literacy enacted in teaching that requires one to act upon the world to change it through reflection on equitable practices (Freire, 1970; Lee, 2011). Ghiso et al. (2013) contended that "Supporting our university students to better understand, learn from, and advocate for the multiple literacies of their students calls for a different orientation to 'accountability'" (p. 52). Hence, teaching requires pre-service teachers to influence and act on the world. Taking action for social justice in the form of community-situated praxis is a well-documented gap in teacher education across many studies (Berry et al., 2020; Campano et al., 2016; Miller, 2017; Milner & Laughter, 2015; Welsh & Schaffer, 2017). For example, Campano et al. (2016) explained that teacher

education centers on "interrogating and resisting the ideologies" (p. 33) that both directly and indirectly associate the lack of academic success with systemic factors (such as race, poverty, immigration status, etc.).

Lack of Instruments to Measure Critical Literacy

Although, there are instruments designed to measure pre-service teachers' beliefs about their efficacy to teach cultural diversity awareness (Henry, 1986; Larke, 1990; Natesan et al., 2011), multicultural awareness, skills, and knowledge (Fraser, 1986; Jones & Walker, 2016), culturally responsive pedagogy (Boon & Lewthwaite, 2015), and social justice and multicultural education (Brown, 2004; Guttmann & Bar-Tal, 1982; Milner et al., 2003; Tran et al., 1994), the field lacks an instrument that examines pre-service teachers' critical literacy beliefs through quantitative research. Despite this significant work in the field, more work is needed to explore evidence-based research beyond qualitative methods on pre-service teachers' critical literacy beliefs (Vasquez et al., 2013). This dissertation research attempts to fill this gap in the literature.

Pedagogical Practices that Support Critical Literacy Praxis

Little is known about the pedagogical practices that teacher educators use to facilitate pre-service teachers' critical literacy teaching skills. Even less is known about the literacy artifacts and tools teacher educators use to enact critical literacy practices. Moreover, there have been relatively few self-analyses of pre-service teachers' critical literacy beliefs (Bishop, 2014; Vaughn & Kuby, 2019). Literacy pedagogies in elementary education include technical skills and strategies, often taught in isolation from sociopolitical contexts (Lee, 2011). Consequently, pre-service teachers rarely situate critical literacy practices in contexts such as identity, agency, and positionality (Lewison et al., 2008). This is a problem because as the

United States student population is growing, the school-going population is becoming increasingly more diverse. By the year 2024, students from non-dominant cultures will represent 56% of the school-going population in the United States (U.S. Department of Education, 2016).

Overall, several gaps in teacher education regarding critical literacy exist in the literature. First, pre-service teachers grapple with what critical literacy looks like in the K-12 classroom for a lack of real-life teaching scenarios. For example, pre-service teachers described limited experiences with mentors in practicums focused on inclusive practices (Civitillo et al., 2018). Second, pre-service teachers' learning of pedagogy requires an ideological transformation through reflective practice. For example, by engaging in conversations about race and racism, pre-service teachers reflected on their misconceptions and biases about minoritized and marginalized students (Umutlu & Kim, 2020). Third, pre-service teachers often conflated critical literacy practices with higher-order comprehension skills and critical thinking. Hence, pre-service teachers must engage in critical literacy practices across the curricula by differentiating between reading techniques and critical literacy as theory and praxis (Cho, 2015). Fourth, pre-service teachers' experiences with critical literacy are centered on disrupting the commonplace and exploring multiple perspectives, while they often lack opportunities to take action for social justice.

As pre-service teachers engage in critical literacy practices mostly by reading and analyzing books with multicultural content, more emphasis is required on pre-service teachers' engagement in creating and disseminating lessons inclusive of all critical literacy dimensions (Lewis Chiu et al., 2017). Fifth, White monolingual pre-service teachers enter the teaching field with a privileged ideology that can be a barrier to effectively enacting critical

literacy practices (Bacon, 2020). At the same time, teacher candidates will teach an increasingly diverse student population as they enter their classrooms. Finally, as Souto-Manning (2019) concludes, "Teacher educators must decide whether to continue perpetuating status quo inequities or work to foster justice as and through transformative praxis. There is no neutral or in-between alternative" (p. 111).

Most importantly, pre-service teachers are not empowered to seek diverse sociocultural experiences during their college years. In student practicums, in-service teacher mentors, particularly in rural areas, may be "lacking in professional knowledge and teaching credential and are resistant to change" (Burton et al., 2013, p. 4). Ultimately, the questions of whether pre-service teachers initiate interest in critical literacy practices, such as examining master narratives or if they perceive them as important, are left unexamined. In sum, more empirical work is needed to understand pre-service teachers' specific pedagogical readiness to teach diverse students and the pedagogy that supports it.

Summary

In this chapter, research on pre-service teachers' beliefs and experiences with critical literacy was discussed. The chapter detailed how pre-service teachers gain pedagogical knowledge, how they engage in pedagogical practices in rural and urban settings, and the challenges in enacting best practices in teacher education. Then, models of teacher learning concerning pedagogical expertise that support critical literacy practices were outlined. Critical literacy was conceptualized as an integral part of pedagogical praxis, and several models of critical literacy teaching were reviewed. Research was discussed that illustrates existing measurements and the rationale for this research rooted in the literature. Finally, barriers and gaps were discussed. In all, more empirical work is needed to understand pre-service teachers'

learning and the pre-service teachers' critical literacy beliefs that support it, which is the aim

of the current study.

CHAPTER 3: METHODS

Introduction

Critical literacy is a form of learning activism by which individuals apply their cultural

capitals and ideologies to uncover power relationships. Discourse reflective of unequal power

relationships pervades texts, media, and people's lived experiences (Vasquez et al., 2013).

With critical literacy, one can "build access to literate practices and discourse resources" to

dismantle the power hegemony (Luke, 2000, p. 449). A brief review of the literature was

provided to conceptualize critical literacy.

Critical literacy was conceptualized as the following dimensions to develop the

Critical Literacy Beliefs Survey (CLBS-1): focusing on the sociopolitical, interrogating

multiple perspectives, disrupting the commonplace, and taking action for social justice

(Lewison et al., 2002). In this next section, I discuss the data collection procedures, which

include survey item development, participant selection, and survey administration.

Instrument Development

Framework

The survey items were developed using the four critical literacy dimensions: focusing

on the sociopolitical, interrogating multiple perspectives, disrupting the commonplace, and

taking action for social justice that outline concepts, constructs, and propositions (Bacharach,

1989; Lewison et al., 2002). I aimed to create a deductive scale based on the theoretical

construct of critical literacy and its respective dimensions (Hinkin, 1998). Because of its

conceptual nature, critical literacy is not directly observable, and it is operationalized as a

survey scale of the latent construct (Colton & Covert, 2007; Hopkins, 1998; Wienclaw, 2009).

Initially, I looked across the critical literacy literature and created the survey items in relation

to the concepts and constructs outlined by Lewison and colleagues (2002). Below, I include a breakdown of each construct as it corresponds to the individual survey item. For each critical literacy dimension, I created a specification table outlining the construct and its definition. The instrument's response scale is a 7-point Likert scale. Below, I justify the usage of a 7-point Likert scale:

- The human mind recognizes about seven distinct categories (Colman et al., 1997), and accuracy could decrease when the scale drops below 7 points (Finstad, 2010).

- For electronic surveys, 7-point Likert scales provide a better format for usability inventories (Finstad, 2010).

- There is no significant difference between a 5-point and 7-point Likert scale, as "reliability and validity are improved by using 5- to 7-point scales." (Dawes, 2008, p. 2)

Once I devised the measurement scale, I developed the survey items based on the critical literacy framework. I centered the survey items around the following dimensions, and for each dimension (Lewison et al., 2002), I utilized the following breakdown as a guide:

Focusing on the Sociopolitical

Discourse is language in use conveying power relationships. How societies have constructed knowledge reveals the power dynamics between peoples across history. In what manner language is used in texts can perpetuate or disrupt the status quo. Knowledge is not created in a vacuum, irrespective of time and space, which is why educators should also teach the sociopolitical contexts in which knowledge is constructed. Therefore, teaching as an act of imparting knowledge "is not a neutral form of social practice," for it is rooted in sociopolitical contexts (Lewison et al., 2002, p. 383). In this way, pre-service teachers need to use the

language of critique to analyze knowledge as a historical product (Shannon, 1995). As pre-service teachers build their repertoire of critical literacy practices, such as developing the language of critique (Shannon, 1995), they can imagine their roles as change agents.

Table 3. 1

Focusing on the Sociopolitical Dimension

Construct	Items	Item Rationale
Focusing on the Sociopolitical. This dimension entails questioning unequal power relationships within social structures.		
Focusing on the Sociopolitical	I attempt to understand the sociopolitical systems in which we operate. I believe that it is important to interrogate how sociopolitical systems shape our identity.	Situating literacy outside of the familiar into a broader sociopolitical context (Boozer et al., 1999)
Focusing on the Sociopolitical	I analyze how language is used to maintain power. I analyze how diverse forms of language can be used as cultural resources. I analyze how nondominant groups can use dominant forms of language without devaluing their own language and culture.	Narrowing in on the connections between power and language Questioning unequal power distributions in master narratives (Fairclough, 1989; Gee, 1990) Literacy creates possibilities for marginalized groups to influence master narratives (Giroux, 1993).
Focusing on the Sociopolitical	I consume texts to engage in the politics of daily life. I consume media to engage in the politics of daily life.	Analyzing the sociopolitical landscape in which we operate Employing critical literacy to access the systems of power that frame our experiences (Lankshear & McLaren, 1993)
Focusing on the Sociopolitical	I challenge cultural borders in the classroom.	Employing critical literacy to access the systems of power that frame our experiences (Lankshear & McLaren, 1993)
Focusing on the Sociopolitical	I ask myself when reading "How is this text trying to position others?" I put myself in the shoes of others to understand their experiences.	Encouraging students to explore literacies beyond the personal and familiar (Vasquez et al., 2013)

Focusing on the Sociopolitical	I believe my identity is shaped by the narratives I was taught as a student.	Exploring how our identities are enacted in the sociopolitical systems in which we operate
	I believe my teaching vision is shaped by how I was taught as a K-12 student.	Examining how our systems of beliefs are shaped by the sociopolitical systems in which we operate (Vasquez et al., 2013)
	I believe my teaching vision is shaped by how I am/was taught at university.	
	I believe that my teaching vision is shaped by my teaching practicum.	
	I believe that my teaching vision is shaped by other classroom teaching experiences.	

Interrogating Multiple Points of View

This dimension focuses on examining texts from different perspectives. Survey items for this dimension focused on the following concepts: fostering empathy, making systemic differences visible, and examining histories both visible and hidden. Putting oneself in the shoes of others enables individuals to experience feelings of empathy (McAllister & Irvine, 2002). When discourses and histories bump against each other, individuals come to a broader understanding of the truth (Botelho & Rudman, 2009). Pre-service teachers' critical literacy learning is mediated by literacy artifacts such as books, textbooks, and lesson plans. As such, pre-service teachers should interrogate multiple perspectives in literacy artifacts both as students and future teachers of literacy.

Table 3. 2

Interrogating Multiple Points of View Dimension

Construct	Items	Item Rationale
Interrogating Multiple Points of View. This dimension focuses on examining texts from different perspectives.		
Interrogating Multiple Points of View	I put myself in the shoes of others to understand their experiences. I intentionally seek out multiple perspectives when reading texts.	Putting oneself in the shoes of others enables individuals to experience feelings of empathy (McAllister & Irvine, 2002). Considering different perspectives simultaneously (Vasquez et al., 2013) Examining counternarratives to broaden one's understanding of dominant narratives (Farrell, 1998)
Interrogating Multiple Points of View	I form my opinions based on multiple perspectives.	Analyzing discourses and histories concurrently to arrive at an objectively constructed truth (Botelho & Rudman, 2009) Exploring multiple and incongruent viewpoints when reading texts (Lewison et al., 2000; Nieto, 1999)
Interrogating Multiple Points of View	I ask myself when reading "Whose voices are heard and whose are missing?" I believe it is important to make differences visible in the classroom. I believe that when school knowledge and family knowledge differ, teachers should make those differences visible in the classroom.	School and family knowledge can differ, and those differences should be addressed in the classroom (Vasquez et al., 2013). Unpacking the root causes of systemic inequities in the classroom (Harste et al., 2000)
Interrogating Multiple Points of View	I feel confident supporting students from different ethnicities and cultures through critical literacy practices. I feel confident in supporting students whose first language is	Acknowledging students' funds of knowledge as vital in the teaching of critical literacies (González et al., 2006)

	not English through critical literacy practices. I feel confident in supporting students with different learning abilities through critical literacy practices (dyslexia, dyscalculia, and dysgraphia, Asperger, Autism, etc.). I feel confident in supporting students of different cultural backgrounds through critical literacy practices. I feel confident in supporting students of different socioeconomic backgrounds through critical literacy practices. I feel confident in supporting immigrant and refugee students in the classroom through critical literacy practices. I feel confident in teaching about minoritized groups in the United States and their histories. I feel confident in teaching about marginalized groups in society.	
Interrogating Multiple Points of View	I believe it is important to use classroom materials (e.g. History textbooks) that represent different points of view (those who are in power and those who are marginalized).	Critical literacy is mediated by literacy artifacts such as books, textbooks, and lesson plans. As such, it is important to interrogate multiple points of view in the textbooks educators use (Vasquez et al., 2013).

Disrupting the Commonplace

This dimension entails questioning unequal power relationships within social

structures. Regarding this dimension, I explored the following concepts: examining

sociopolitical systems, examining dominant ideologies, and situated cognition. Literacy

practices are shaped by the politics that affect our daily lives. Human cognition is cultivated

in a sociopolitical system mediated by power relationships (Freire, 1970). Thus, situating

teaching in a sociopolitical context means acting on the unbalanced power distributions in

society by resisting dominant ideologies.

Table 3. 3

Disrupting the Commonplace Dimension

Construct	Items	Item Rationale
Disrupting the Commonplace. This dimension entails a deeper examination of texts through a cultural, political, and intertextual lens.		
Disrupting the Commonplace	I believe that literacy is a sociopolitical concept.	Examining pre-service teachers' beliefs about how they conceptualize literacy Adopting a different lens to see what others see (Takaki, 1993)
Disrupting the Commonplace	I ask myself when reading "How is this text trying to position me?"	Analyzing how texts promote master narratives Examining whose perspective is promoted and whose is left out (Botelho & Rudman, 2009; Luke & Freebody, 1997) Questioning how texts construct individuals and how minoritized and marginalized groups are portrayed in popular discourse (Luke & Freebody, 1997)
Disrupting the Commonplace	I believe that all knowledge is a historical product.	Interrogating knowledge bases and the narratives that pervade them (Shor, 1987)
Disrupting the Commonplace	I believe that reading all texts with a critical eye is important.	Adopting a critical lens is important to enacting any form of critical literacy practice.
Disrupting the Commonplace	I critically analyze the media that I consume. I analyze how people are portrayed by television, social media, video games, comics, etc.	Raising awareness of critical reading across the curriculum (including various forms of media) Analyzing depictions of people in the media (K-12) (Marsh, 2000; Shannon, 1995; Vasquez, 2000)
Disrupting the Commonplace	I am questioning practices of privilege and injustice when teaching. I am questioning practices of privilege and injustice when learning.	Mentoring pre-service teachers to operate with a critical lens in the classroom (Shannon, 1995)

Disrupting the Commonplace	I believe that language expresses power. I believe it is important to support minoritized students' native languages and other linguistic forms of expression in the classroom.	Discourse frames how individuals enact their identities (Fairclough, 1989; Gee, 1990). Language, with its sociopolitical underpinnings, constructs, and Discourse (Gee, 2010)
Disrupting the Commonplace	I believe that teaching is a form of activism. I question unequal power relationships in my teaching practice. I analyze how social action can transform power inequalities.	Teaching is a social act with sociopolitical implications; teaching is not enacted in a vacuum and it is not neutral, "yet often it takes place with no attention given to how sociopolitical systems, power relationships, and language are intertwined […] (Lewison et al., 2002, p. 383).
Disrupting the Commonplace	I often read narratives that give people a voice who otherwise would not have one. I evaluate how the nondominant groups' lived experiences are represented in the curriculum.	Teaching is not a neutral act. Reimagining the teacher role as that of an activist (Janks, 2000)

Taking Action for Social Justice

This dimension entails taking action for social justice towards equality. The survey items for this dimension focus on exploring pre-service teachers' visions of praxis; and how pre-service teachers enact their visions within the scope of imagined reflective and critical literacy practices. To be a good educator, one has to reflect on their own experiences and make sense of them. Reflection is key to developing one's critical literacy praxis. Taking action for social justice and exercising one's agency is part of being a reflective practitioner (Vaughn, Jang, Sotirovska, & Cooper-Novack, 2020; Vaughn, Premo, Sotirovska, & Erickson, 2020).

Table 3. 4

Taking Action for Social Justice Dimension

Construct	Items	Item Rationale
Taking Action. This dimension entails taking action for social justice towards equality.		
Taking Action	I engage in reflection upon the world in order to transform it.	To be a good educator, individuals have to reflect on their own experiences. Reflection is key to developing one's critical literacy praxis (Freire, 1970).
Taking Action	I work on developing my vision of teaching with social justice in mind.	Self-reflection is a part of being a critical practitioner, central to praxis.
Taking Action	I use language carefully to minimize bias and stereotypes.	Examining the role of language in taking action for social justice (Vasquez et al., 2013)
Taking Action	I believe that critical literacy increases opportunities for minoritized students to act on their cultural resources in the classroom.	By acting on students' funds of knowledge, educators broaden the possibilities for social memberships in the classroom. Students can leverage their multiple social memberships, languages, and cultures to experience classroom teaching relevant to their lives (Janks, 2000).
Taking Action	I use diverse cultural resources to understand others. I seek out resources outside my teaching program to help me learn more about critical literacy. I seek out diverse children's literature that I can share with my students.	Diverse forms of language can be used as literacy resources. Students can leverage their multiple social memberships to change the dominant discourse (Janks, 2000). Self-reflection is a part of being a reflective practitioner, critical to praxis.
Taking Action	I purposefully act upon the world in order to transform it.	Educators and students can benefit from occupying multiple social memberships and operating with diverse cultural resources (Giroux, 1993).
Taking Action	I am developing a critical curriculum.	Taking action for social justice by creating opportunities for critical literacy practices
Taking Action	I am engaging in some form of activism in order to change the world.	Taking action for social justice by supporting student agency

Taking Action	I am confident in my knowledge of how to teach critical literacy.	Self-reflection is a part of being a reflective practitioner, critical to praxis.
Taking Action	I want a more inclusive education for my students than what I had experienced.	Taking action for social justice by supporting student agency
Taking Action	I try to put my social justice vision into practice.	Taking action for social justice by supporting student agency
Taking Action	I plan to teach with students' diverse social identities in mind.	Taking action for social justice by supporting student agency
Taking Action	I want to provide inclusive education for my students by taking social action.	Self-reflection is a part of being a reflective practitioner, critical to praxis.

The completed specification table showcases the constructs, concepts, and propositions used to create the survey items; see Table 3.5. Experts in the field revised the survey items before I uploaded the CLBS-1 instrument to Qualtrics. An *expert* was defined as a teacher educator or researcher who employs critical literacy in their teaching and research. Three panels of experts participated in the revision of the survey items. The first panel, comprising four literacy professors whose scholarship centers on critical literacy were invited to match the survey items to the critical literacy dimensions. The second panel of four teacher educators reviewed how well the survey items represented pre-service teachers' knowledge base of critical literacy. The third panel, comprising eight pre-service teachers, evaluated the items for appropriateness, clarity, and readability for the target population, pre-service teachers. Then, I uploaded the finalized survey items to Qualtrics and sent the survey invitation to 158 professors and teacher educators who teach undergraduate courses on literacy across the United States to share the survey with their pre-service teachers.

Table 3. 5

Finalized Critical Literacy Specification Table

Critical Literacy Key Concepts from Specification Tables			
Focusing on the Sociopolitical	**Interrogating Multiple Perspectives**	**Disrupting the Commonplace**	**Taking Action for Social Justice**
Situating teaching in a sociopolitical system (Vasquez et al., 2013).	Putting oneself in the shoes of others (McAllister & Irvine, 2002)	Enacting critical literacy within the classroom literacies (Lewison et al., 2002)	Reflecting on one's critical literacy praxis (Freire, 1970)
Going beyond the familiar and personal to arrive at an objectively constructed truth (Lankshear & McLaren, 1993)	Evaluating various perspectives simultaneously (Vasquez et al., 2013)	Critically consuming media for how people are portrayed (Marsh, 2000; Vasquez, 2000)	Becoming a reflective practitioner with agency (Vaughn et al., 2020)
Examining unequal power relationships in the systems in which we operate (Boozer et al., 1999)	Examining master narratives and counternarratives (Farrell, 1998)	Developing an activist perspective in the responsibilities as educators (Bishop, 1990)	Taking action to reimagine cultural borders (Giroux, 1993)
Questioning unequal power relationships in the systems in which we operate (Vasquez et al., 2013)	Examining the discrepancy between school knowledge and family knowledge in the classroom (Vasquez et al., 2013)	Operating with the language of critique to analyze how knowledge is constructed (Shannon, 1995)	Encouraging teachers and students to take action for social justice within their communities (Janks, 2000)
Studying the connection between language and power (Fairclough, 1989; Gee, 1990)	Interrogating different knowledge bases in constructing critical literacy praxis (Harste et al., 2000)	Bringing systemic inequalities at the forefront of the classroom (Harste et al., 2000)	Increasing literacy opportunities for students to become *critical citizens* (Morrell, 2015)
Interrogating how the systems in which we operate shape our beliefs, experiences, actions, and visions (Vasquez et al., 2013)	Interrogating multiple points of view in the textbooks and other teaching materials (Vasquez et al., 2013)	Leveraging students' funds of knowledge in the classroom (González et al., 2006)	Connecting the classroom with the community (González et al., 2006)

Item Development

The survey items were evaluated in three stages by three different panel experts. The first panel comprised researchers whose scholarship centers on critical literacy. The second panel comprised teacher educators who teach literacy courses to pre-service teachers. The third panel of pre-service teachers, who had to have taken at least one literacy course, took part in cognitive interviews. In the first two stages of item development, I invited eight panel experts (Vogt et al., 2004) to evaluate how well the items represented the latent construct. In the first stage of item evaluation, the experts on each panel had to reach a consensus of 75%, where three out of four experts had to perform the same item-to-dimension matching for an item to remain in the survey; see Figure 3.2 (Fink & Litwin, 1995; Hinkin, 1998). The item evaluation was a three-stage process to ensure construct and item validity.

Initially, I created a google form of all the items and dimensions; see Figure 3.2. Next, I sent the google form to critical literacy scholars to match each item to one of the critical literacy dimensions as they best see fit. The purpose of the item-to-dimension matching was to ensure that each item represented the latent construct. When reviewers did not agree on the item-to-dimension matching, survey items from the initial pool of 60 were deleted, leaving 33 survey items for the next panel review. Then, I asked experts to rate the strength of each item according to the construct using another google form. The goal of this step was to ensure that items represented the construct down to the item level. Revisions were made according to the experts' feedback.

1. I attempt to understand the sociopolitical systems in which we operate.
4 responses

- Focusing on the Sociopolitical
- Interrogating Multiple Points of View
- Disrupting the Commonplace
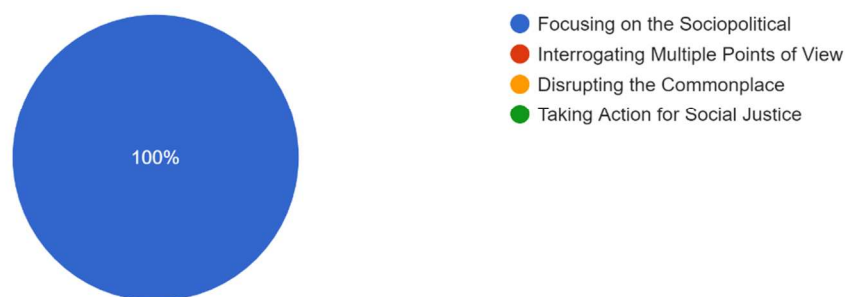- Taking Action for Social Justice

100%

Figure 3. 2. Example of Google Form CLBS-1 Expert Panel

In stage 3 of item development, cognitive interviews were employed to strengthen instrument design and investigate participants' thought processes when responding to the survey items (Desimone & Le Floch, 2004). This process helps the researcher revise the survey items for clarity, comprehensibility, and appropriateness for the participants. The CLBS-1 represents the factors that inform pre-service teachers' beliefs on critical literacy.

In stage 3, I conducted cognitive interviews with a sample of pre-service teachers (*n*= 8) sampled from the target population (see Appendix D and E). Before I started recording the interviews with the pre-service teachers, I asked for permission. I used the Zoom platform to record and transcribe the interviews, structured around the four dimensions of critical literacy: focusing on the sociopolitical, disrupting the commonplace, interrogating multiple points of view, and taking action for social justice (Lewison et al., 2002). I asked follow-up questions to determine pre-service teachers' comprehension of the critical literacy concepts. For instance, I ensured participants comprehended critical literacy concepts, such as multiple perspectives, issues of power, and other examples from their schooling and practicum that centered on critical literacy.

I performed cognitive interviews to increase construct validity and ensure comprehension of the survey items (Johnson & Morgan, 2016). Cognitive interviews were structured around recall response and response matching to the provided scale. I ensured that there was a satisfactory level of item comprehension among the sample of participants. Each interview was audio-recorded and transcribed for analysis. Based on these transcripts, I made additional edits to the survey items. For example, I reworded the item, "I plan to teach with students' diverse social identities in mind" into "I work on developing my vision of teaching with social justice in mind." After the cognitive interviews, the instrument comprised 24 items.

According to Hinkin (1998), "The eventual goal will be the retention of four to six items for most constructs, but the final determination must be made only with accumulated evidence in support of the construct validity of the measure" (p. 109). Hinkin also advised that the instrument should contain double the number of items required for the final scale. Hence, to sample the construct domain accurately, I created more survey items than necessary, following Hinkin's recommendation that "the final scales should be composed of four to six items" (p. 109). While maintaining parsimony, I rendered the critical literacy concepts into six items per factor comprising the final CLBS-1 scale (Crede & Harms, 2019; Mathieu et al., 2020). The survey scale included 24 items with six items per dimension to ensure adequate sampling of the construct domain and allow item deletion during the CFA.

Based on the expert reviews (stages 1 and 2) and cognitive interviews (stage 3), I developed a measurement scale to survey larger samples of participants (Willis, 2005). I added the refined survey items into Qualtrics with the demographic questions to begin the data collection process; see Figure 3.3.

Population and Sampling

Sample

The sample represented pre-service teachers enrolled in teacher education programs (*N*=405). This included students in alternatively certified programs and traditional teacher education programs. I followed Everitt's (1975) and Nunnally's (1978) sampling guidelines, requiring the sampling size to be at least ten times as many participants as variables. Considering that the CLBS-1 instrument featured 24 content items, the recommended sample size from the target population expected to be surveyed was (*N*=240) at minimum. To administer the survey, I conducted the following data collection procedures:

Purposive Sampling

Purposive sampling or judgment sampling "is the deliberate choice of a participant due to the qualities the participant possesses" (Etikan et al., 2016, p. 2). In this case, pre-service teachers attending a U.S. college/university were selected as the population of interest. To exemplify, I was working with the faculty members in my committee and faculty members from other institutions by asking them to share the survey in their pre-service teacher education programs (See Appendix B for the sample email letter). In addition to purposive sampling, I also used snowball sampling. Snowball sampling is a nonprobability sampling technique by which current study participants recruit future participants through collegiate relationships, such as acquaintances, colleagues, friends, and others (Biernacki & Waldorf, 1981; Bogdan & Biklen, 1998). To illustrate, I asked my committee members to share the survey with colleagues from other institutions who would then share the CLBS-1 instrument with their pre-service teachers.

Education Associations and Organizations*.* I contacted national U.S. organizations such as the Literacy Research Association (LRA) and other teacher associations, such as the Association of Literacy Educators and Researchers (ALER) and the National Council of Teachers of English (NCTE). I utilized the ListServ LRA members database to engage in survey outreach outside of the University of Idaho. I uploaded the CLBS-1 instrument to Qualtrics with the IRB consent form at the beginning of the survey and a progress bar. Next, I disseminated the survey link through email. Along with the survey items addressing the critical literacy dimensions, the CLBS-1 instrument collected demographic data about the respondents.

University Directories, ResearchGate, and Google Scholar*.* I contacted teacher educators from two to four universities per U.S. state. I found out about the teacher educators' teaching and research experiences through ResearchGate, their university directories and profiles, and Google Scholar citations. The database comprised 158 teacher educators from all U.S. states who taught literacy courses to pre-service teachers.

Demographic Categories

Participants were asked to include the following demographic information (Sullivan, 2020):

- State in which they attend school, location of school (urban, rural, suburban)
- Age group
- Gender identity that they most identify with (male, female, non-binary, transgender male, transgender female, other/ not listed, prefer not to say)

- Race/ethnicity (White, Black or African American, Hispanic or Latino, Native American and Alaska Native, Asian American, and Native Hawaiian and Other Pacific Islander, Other, prefer not to say)

- Current classroom level (freshmen, junior, sophomore, senior, and graduate student)

- Besides English, do you speak another language at home (please select one)? Yes/ No - If yes, which language(s) do you speak

- Type of teacher education program (traditional teacher preparation, alternatively certified program, Other - please indicate)

Two demographic categories, type of teacher preparation program and geographic location, are defined for clarity. *Traditional teacher preparation* encompasses 4-year programs as part of discipline-focused departments, colleges, and universities, such as elementary, middle school, secondary, special education preparing undergraduate candidates to teach in K-12 settings (Hawk & Schmidt, 1989). Alternatively, the *certified teacher preparation* program offers other ways of obtaining teacher certification geared towards individuals with diverse education and experience backgrounds. This type of teacher certification varies across states, and the pathway of becoming certified can depend on the need and area of expertise that the teacher candidate is fulfilling (Darling-Hammond et al., 2005).

According to the Census Bureau, the urban, suburban, and rural qualifiers are defined as:

Rural: The areas that are not urban are classified as rural as per the Census Bureau guidelines. For example, "a rural place is any incorporated place or census designated place

(CDP) with fewer than 2,500 inhabitants that is located outside of an urban area" (Ratcliffe et al., 2016, p. 3).

Urban: "An urban area is a continuously built-up area with a population of 50,000 or more. It comprises one or more places—central place(s)—and the adjacent densely settled surrounding area—urban fringe—consisting of other places and nonplace territory" (Ratcliffe et al., 2016, p. 3).

Suburban: A suburban area is "any incorporated place or census designated place (CDP) with at least 2,500 inhabitants (Ratcliffe et al., 2016, p. 3).

Data Analysis Procedures

The Critical Literacy Beliefs Survey (CLBS-1) development timeline is presented in Figure 3.3. The CLBS-1 uses a 7-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = neither agree nor disagree, 5 = somewhat agree, 6 = agree, and 7 = strongly agree) (Sullivan & Artino, 2013).

> **Data Collection Timeline**
>
> Stages for expert review panels and cognitive interviews (May 2020- July 2020)
>
> I conducted the purposive sampling process in several phases:
>
> - Phase 1: local universities and colleagues (Sept.1st)
> - Phase 2: professional teacher and literacy research organizations (Sept. 15th)
> - Phase 3: committee members' sharing the survey with their colleagues (Sept 20th)
> - Phase 4: per state, I reached out to 2-6 university faculty (Sept. 30th) to administer the CLBS instrument.
>
> Data collection continued all throughout September and mid-October, with repeating outlined phases above.
>
> Data was analyzed in early November.
>
> Results and Discussion from the CLBS-1 were written up in early December.
>
> Final drafts of the study were completed by the end of December 2020.

Figure 3.3. Outline of the Data Collection Timeline

Survey Operalization Procedure

I designed the survey following Lewison and colleagues' (2002) critical literacy guide for teachers. To operationalize the critical literacy construct, I first broke down the four dimensions of critical literacy into interview questions. In the initial phase of the project, I interviewed a sample of pre-service teachers on their critical literacy beliefs during a literacy methods course. The instructor conceptualized the literacy course to focus on critical topics where pre-service teachers could interrogate multiple perspectives through children's literature. During the interview stage, I examined how the interview questions represented pre-service teachers' beliefs on critical literacy. I used the pilot study findings to refine the

survey items for the CLBS-1 instrument. The CLBS-1 was used to measure the critical

literacy beliefs of a larger sample of pre-service teachers.

I employed Confirmatory Factor Analysis (CFA) to examine if the measures of the

pre-service teachers' critical literacy beliefs are consistent with the dimensions defining the

critical literacy construct (Lewison et al., 2002), and test how the collected data fit the

hypothesized measurement model (Marsh et al., 2009). I operationalized the model through

the four dimensions of critical literacy: disrupting the commonplace, interrogating multiple

points of view, taking action, and focusing on the sociopolitical. Then, I estimated the

confirmatory factor analysis model with continuous factor indicators shown in the graphic

below; see Figure 3.4. The hypothesized model of critical literacy has four correlated factors

measured by six continuous factor indicators.
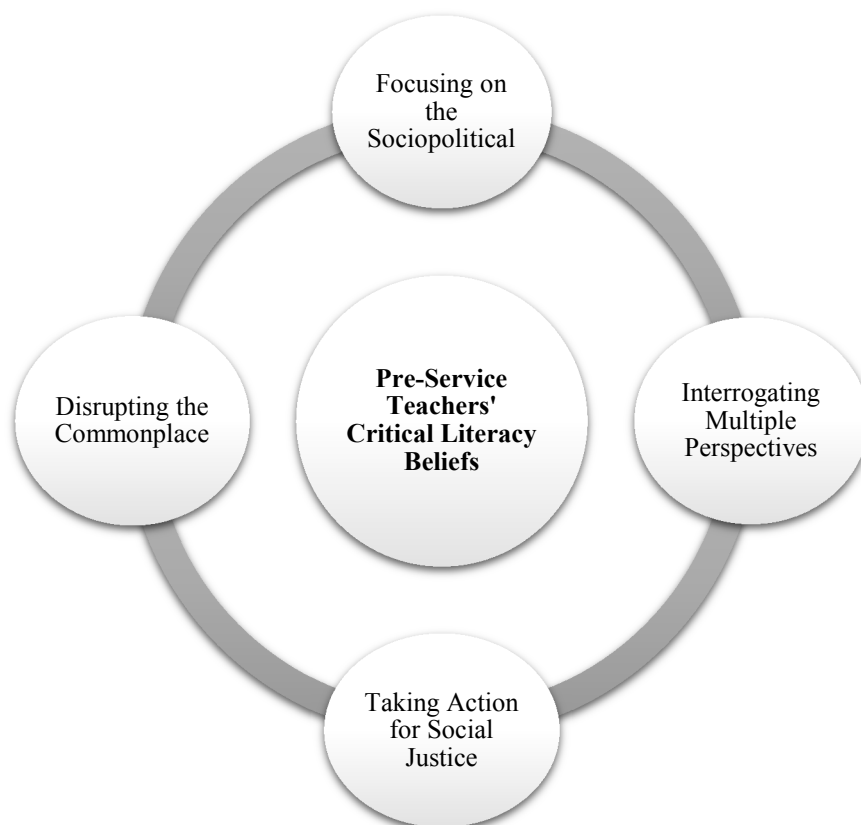
Figure 3.4. Illustration of the Critical Literacy Model Dimensions

Research Question:

To what extent does the Critical Literacy Beliefs Survey (CLBS-1) represent the

hypothesized dimensions of critical literacy found in the literature?

Following the critical literacy guidelines for each dimension, I devised the survey

items; see Figure 3.4.

Survey Item Review. Informed by the expert reviews, cognitive interview data, and

literature comparing different Likert scales, I developed items for a 7-point Likert scale.

Participants evaluated the items on a scale of strongly disagree to strongly agree. All survey

items began with the statement "I + verb" followed by a range of responses: strongly disagree,

somewhat disagree, disagree, neither agree nor disagree, somewhat agree, agree, and strongly

agree. I chose this Likert scale to increase familiarity, illustrate a gradient of opinions, and

reduce the cognitive load (Cheng, 2017). The constructs, concepts, and propositions from

Lewison et al.'s (2002) four-dimension framework were rendered into measurable variables,

while the critical literacy dimensions became the factors in the confirmatory factor analysis.

I devised four specification tables for each of the Lewison et al.'s (2002) dimensions

(see Tables 3.1, 3.2, 3.3, and 3.4) to ensure that the statements per factor are uniform and

correspond to the constructs, concepts, and propositions in the critical literacy framework.

Evident from Tables 3.1, 3.2, 3.3, and 3.4, survey items from each dimension are grouped

under one construct or in some instances under different constructs, where the constructs are

the factors that shape pre-service teachers' beliefs. For example, focusing on the sociopolitical

informs participants' beliefs of the underlying power relationships in texts and other

classroom literacy artifacts.

Reliability and Validity. To ensure content validity, three panels of experts reviewed the items and validated the scale. I defined the dimensions of critical literacy at the top of the google form and below each survey item was the evaluation scale (Lewison et al., 2002). I asked the experts to match each item to one of the four critical literacy dimensions. Once the first round of reviews was complete, pie charts for each item were generated that showcased the degree of agreement among reviewers. Each pie chart served as a specification table to ensure the item corresponded to the appropriate factor and theoretical concept. Content experts evaluated 60 items and matched the items to one of the critical literacy factors, such as disrupting the commonplace, interrogating multiple points of view, taking action for social justice, and focusing on the sociopolitical. I removed items with less than 75% agreement among reviewers, retaining at least six items per factor.

The construct domain was sampled carefully to minimize measurement error. I incorporated cognitive interviews using reflection methods in the form of observation, probing, questioning, and think alouds (Desimone & Le Floch, 2004; Groves et al., 2009; Johnson & Morgan, 2016). In stage 3 of the survey development, I invited 10 pre-service teachers to review the survey items; eight pre-service teachers responded and were interviewed. The participants were sampled from the target population (pre-service teachers), contacted by email, and interviewed on the Zoom platform (see Appendix D). In stage 3, I shared the survey with the third panel of reviewers, the pre-service teachers, as a Word document and encouraged them to annotate it with comments about the survey items. I asked the pre-service teachers to read all 24 items and highlight and comment on anything that appears to be unclear or confusing to them. Pre-service teachers examined each item for readability, clarity, and appropriateness (see Appendix E). As a result, I rephrased several

survey items for clarity and comprehension. For example, the item, "I analyze how language is used to maintain power" was edited into "I analyze the biased language in the texts I read." Another case-in-point is "I act upon the world in order to transform it" to "I take action in my community to promote social justice." Based on the pre-service teacher feedback, I deleted four items from the instrument because they were unclear for the target population. I focused the item revision on word choice, that is, terms that pre-service teachers thought should either be defined, expanded upon, or replaced. I also revised survey items for clarity concerning the communicative aspects of the ideas conveyed, such as the implied meaning or intent. Overall, pre-service teachers expressed that the items correlated well with their beliefs about teaching and learning and deemed the revised survey items appropriate.

Survey Validation Procedure

Research Setting and Participants. After gathering data from the pilot study, Developing Pre-service Teachers' Critical Literacy Beliefs, and the feedback from three panels of experts evaluating the survey items, I developed the CLBS-1 survey and uploaded it to Qualtrics. I employed purposive sampling (Etikan et al., 2016) to determine a sample group of pre-service teachers as the subset of the population for confirmatory factor analysis (CFA) (Pearson & Mundform, 2010). Initially, I used the following scale for determining a desirable sample size "50 – very poor; 100 – poor; 200 – fair; 300 – good; 500 – very good; 1000 or more – excellent" (Comfrey & Lee 1992, p. 217). As the CLBS-1 instrument contains 24 content items and 10 demographic items, I adopted Nunnally's (1967) guideline, "a good rule is to have is at least ten times as many subjects as variables" (p. 335). Crocker and Algina (1986) suggested a minimum of 10:1 participants per item, while Tabachnick and Fidell

(2013) recommended at least 300 participants; however, they made no remarks on the participant to item ratio.

Sampling Process. I employed purposive sampling to obtain a subset of the pre-service teacher population to pilot the CLBS-1 instrument. To distribute the CLBS-1 link to pre-service teachers, I first contacted teacher educators who teach literacy courses to pre-service teachers. For this reason, I assembled a roster of teacher educators at universities in the United States that offered a teacher program. I contacted at least two faculty members from at least two universities from each U.S. state that taught literacy courses to pre-service teachers relating to diversity and social justice. I individually read the profiles of faculty members whose biographies and profiles included: critical literacy, pre-service teacher education, educational equity, literacy instruction as it relates to social justice, race and equity and its link to education among pre-service teachers, multicultural children's literature, linguistically diverse teachers, and other related fields. I contacted 158 professors across the United States whose interests encompassed critical literacy, literacy education, teacher education, social justice, and diversity. The emails were personalized to the teaching and research interests of the professors (see Appendix B). Teacher educators contacted pre-service teachers, whom they taught, through email. Due to the COVID-19 pandemic, recruiting participants by advertising on professional networks, at conferences, and symposiums was limited, as the events took place on digital platforms in individual virtual sessions.

Summary

By employing quantitative methods, I created a survey to measure pre-service teachers' critical literacy beliefs. The goal was to operationalize Lewison and colleagues' (2002) four critical literacy dimensions as an instrument that will determine the factors of pre-

service teachers' critical literacy beliefs. This study was twofold. First, I interviewed pre-service teachers on their critical literacy beliefs. In conjunction with Lewison and colleagues' dimensions of critical literacy, the qualitative codes from the interviews served to refine the survey items. Second, I adapted the four critical literacy dimensions into factors and tested this model with a sample of pre-service teachers. Two panels of experts, comprising researchers and teacher educators of literacy, evaluated the factor model. The third panel of eight pre-service teachers critiqued the items for clarity, readability, suitability, and relevance to their critical literacy praxis. This research aimed to produce a scale that measures pre-service teachers' critical literacy beliefs to inform classroom practices on critical literacy.

CHAPTER 4: FINDINGS

Introduction

In this chapter, the findings from the study's data collection process and preliminary analysis are reported. The research question that guided this study was: To what extent does the Critical Literacy Beliefs Survey (CLBS-1) represent the hypothesized dimensions of critical literacy found in the literature? Included in this chapter is a breakdown of the respondents' demographic information. The implications of the characteristics of the sample will be explored in detail in Chapter 5.

Demographics and Descriptive Statistics

I created an instrument that was administered to pre-service teachers across the United States. The instrument contained 32 items, out of which 24 were content items relating to the critical literacy dimensions, eight were demographic items, and two were procedural (the first item in the survey asking for consent and the final survey item asking for participation in the follow-up study). The aim of the project was to validate the CLBS-1 instrument and to establish the factor structure using the four critical literacy dimensions put forth by Lewison et al. (2002).

Demographic Information for the Sample of Pre-service Teacher Participants

I contacted teacher educators (*n*=158) who were asked to disseminate the survey to their pre-service teachers by email. In total, 405 participants took the survey out of whom 318 completed all the content questions (1-24) and 311 completed all the demographic questions (25-32). Thus, a portion of the demographic data is not documented for 94 participants. For confirmatory factor analysis, Hoelter (1983) recommended at least 200 participants, while

Hinkin reiterated that the larger the sample size, the smaller the standard error. For this study, the criteria for sample size were met (*N*=405).

Below, I showcase Figure 4.1 and frequency tables (4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8) of the participants' demographic information (*n*=311); see Table 4.6 for cross-categorical demographic information, including race/ethnicity, gender identity, and location of college/university. To generalize the findings to the greater population, I gathered data from a purposive sample of pre-service teachers across the United States (Etikan et al., 2016). Figure 4.1 showcases the location of the participants who took the survey.
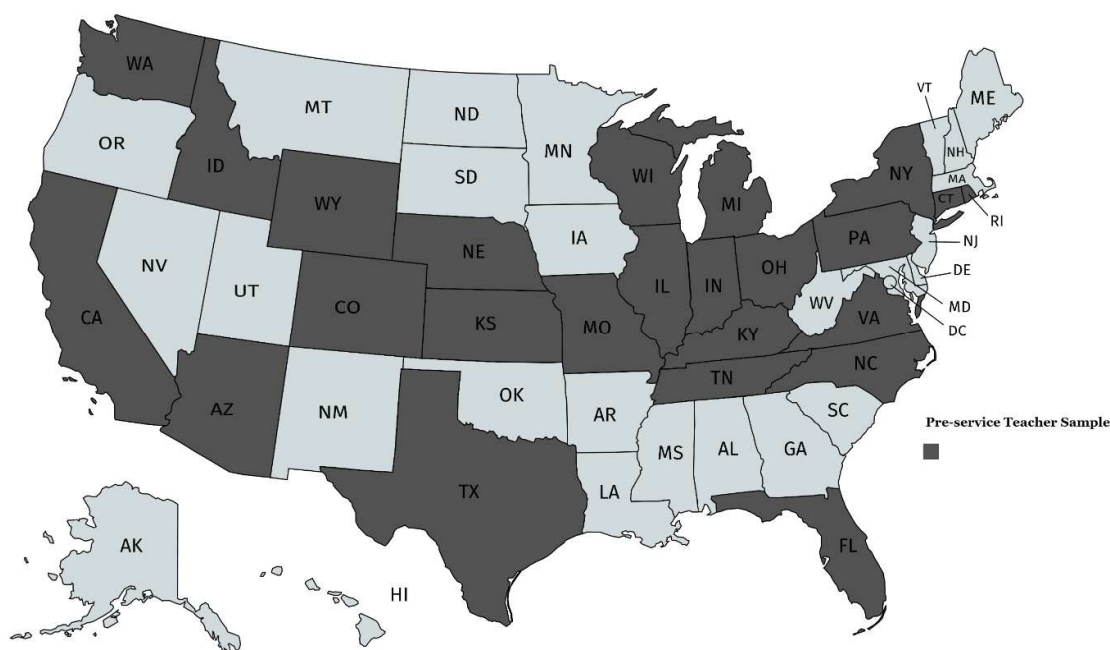
Figure 4. 1. Sample of Pre-service Teachers from the United States
Note. Shaded areas showcase the location of participants per state.

The frequency table for demographic information surveying for college/university location (Table 4.1) showed that 130 or 41.8% of the participants attend college in a rural area of the country, 89 or 28.6% attend college in an urban area, and 84 or 27% attend college in a suburban area. The textual descriptors in the category entitled, Other, 8 or 2.6% included

answers, such as I am not sure, a small city on the outer ring of a mid-size city, near the downtown of the city, a small town, rural but in a small college town.

Table 4. 1

Demographic Data for College/University Location

College/University Location	Frequency	Percent	Valid Percent
Rural area	130	41.8	41.8
Suburban area	84	27.0	27.0
Urban area	89	28.6	28.6
Other	8	2.6	2.6
Total	311	100.0	100.0

The frequency table for demographic information surveying for age showed that out of all participants (*n*=311) who answered the demographic questions, 249 or 80.1% are within the 18-24 age range, 38 or 12.2% are within the 25-34 age range, 14 or 4.5% are within the 35-44 age range, 7 or 2.3% participants were within the 45-54 age range, 1 or .3% is within 55-64 age range, 1 or .3% is within the 85 or older category, and 1 or .3% is under 18 years of age; see Table 4.2.

Table 4. 2

Demographic Data for Age Range

Age Range	Frequency	Percent	Valid Percent
18 – 24	249	80.1	80.1
25 – 34	38	12.2	12.2
35 – 44	14	4.5	4.5
45 – 54	7	2.3	2.3
55 – 64	1	.3	.3
85 or older	1	.3	.3
Under 18	1	.3	.3
Total	311	100.0	100.0

The demographic category of gender identity asked participants to select the gender identity with which they closest identified; see Table 4.3. The options included: male, female, non-binary, transgender male, transgender female, other/not listed, prefer not to say. The participants selected three of all the selection options and reported, female (*n*=261) or 83.9%, male (*n*=43) or 13.8%, and non-binary (*n*=7) or 2.3%.

Table 4. 3

Demographic Data for Gender Identity

Gender Identity	Frequency	Percent	Valid Percent
Female	261	83.9	83.9
Male	43	13.8	13.8
Non-binary	7	2.3	2.3
Total	311	100.0	100.0

The frequency table for demographic information surveying for race/ethnicity, Table

4.4, showed that out of all participants (*n*=311) who answered the demographic questions, 244

or 78.5% identified as White, 27 or 8.7% identified as Hispanic or Latino, 17 or 5.5%

identified as Asian, 11 or 3.5% identified as Other, 8 or 2.6% identified as Black or African

American, 2 or .6% identified as American Indian or Alaska Native and 2 or .2% identified as

Native Hawaiian or Pacific Islander.

Table 4. 4

Demographic Data for Race/Ethnicity

Race/Ethnicity	Frequency	Percent	Valid Percent
American Indian or Alaska Native	2	.6	.6
Asian	17	5.5	5.5
Black or African American	8	2.6	2.6
Hispanic or Latino	27	8.7	8.7
Native Hawaiian or Pacific Islander	2	.6	.6
Other	11	3.5	3.5
White	244	78.5	78.5
Total	311	100.0	100.0

The information for classroom level is displayed below. The data analysis showed that

out of all participants (*n*=311) who answered the demographic questions, 104 or 33.4% were

seniors (undergrad), 72 or 23.2% were sophomores (undergrad), 68 or 21.9% were juniors

(undergrad), 72 or 32.2 percent were graduate students, and 25 or 8% were freshmen

(undergrad). The majority of the participants were undergraduate students with 239 or 77%.

Table 4. 5

Demographic Data for Classroom Level

Classroom Level	Frequency	Percent	Valid Percent
Freshman (Undergrad)	25	8.0	8.0
Junior (Undergrad)	68	21.9	21.9
Senior (Undergrad)	104	33.4	33.4
Sophomore (Undergrad)	42	13.5	13.5
Graduate student	72	23.2	23.2
Total	311	100.0	100.0

In Table 4.6, cross-tabulated demographic information is provided. From the analysis, White female pre-service teachers (*n*=90) attending traditional teacher preparation in rural areas were the predominant respondent to the survey, followed by White females attending a college/university in a suburban area (*n*=61), followed by White females attending a college/university in an urban area (*n*=50).

Table 4. 6

Cross-tabulated Data: College/University Location, Race/Ethnicity, and Gender Identity

Demographic Categories		College/University Location (n=311)			
Race/Ethnicity	Gender Identity	Rural area	Suburban area	Urban area	Other
American Indian or Alaska Native	Female	0	0	1	0
	Male	1	0	0	0
Asian	Female	5	6	4	0
	Male	0	0	2	0
Black or African American	Female	1	1	5	0
	Non-binary	0	0	1	0
Hispanic or Latino	Female	7	6	11	0
	Male	2	1	0	0
Native Hawaiian or Pacific Islander	Female	2	0	0	0
Other	Female	1	0	4	0
	Male	0	0	1	1
	Non-binary	3	0	1	0

White	Female	90	61	50	6
	Male	17	9	9	0
	Non-binary	1	0	0	1

Additional Demographic Information

Additional demographic information included languages spoken at home, besides

English; see Table 4.7. If the answer was yes; then, the participants were asked to type in the

language in a text box. Out of all participants who took the survey (n=311), 270 or 86.82%

did not speak another language at home, and 41 or 13.18% spoke another language besides

English at home.

Table 4. 7

Demographic Data for Other Languages Spoken at Home

Other Language Spoken at Home	Frequency	Percent
No	270	86.82%
Yes (please indicate below)	41	13.18%
Total	311	100%

Out of the participants that selected other followed by a textual response (n=41), 49%

spoke Spanish in their homes, 20% spoke Mandarin Chinese, 10% used American Sign

Language, 6% spoke Korean, 5% Punjabi, 2% German, 2% Arabic, 1% Serbo-Croatian, 1%

Urdu, 1% Italian, 1% AAVE/Patois, 1% Cantonese, 1% Bulgarian.

Table 4. 8

Demographic Data for Program Type

Program Type	Frequency	Percent
traditional 4-year teacher education program	261	83.92%
alternatively certified program (e.g., Teach for America, masters plus certification program)	36	11.58%
Other (please indicate below)	14	4.50%
Total	311	100%

The frequency table for demographic information surveying for type of teacher

education program showed that out of all participants (n=311) who answered the demographic

questions, 261 or 83.92% attend a traditional 4-year teacher education program, 36 or 11.58%

attend an alternatively certified program (e.g., Teach for America, masters plus certification

program, and 14 or 4.5% selected Other; see Table 4.8. Participants (n=14) who selected

Other provided the following textual answers: master's program (n=12), 3-semester teacher

education program (n=1), and 3-year teaching program (n=1). The CLBS-1 instrument was

open for eight weeks in Qualtrics. Then, the data were uploaded into Mplus, and descriptive

statistics were calculated as part of the preliminary analysis.

Descriptive Statistics and Reliability Analysis

Descriptive Statistics

Descriptive statistics for each item were calculated, including the mean, standard

deviation, and variance. When testing for item quality, Johnson and Morgan (2016) explain it

is beneficial to look at the response scale and analyze how the participants responded across

the continuum of Likert scale response options. Below, I generated the standard deviation and

variance to examine how responses were spread across the survey scale. In Table 4.9, from

the mean and standard deviation, it was evident that the responses were at the extremes of the

Likert scale. A high item mean (Avg mean=5.47 and mode=6) showed that the majority of

respondents selected 6 = *agree* on the Likert scale. The average standard deviation (*SD*=1.25)

showed that the responses were similar across the participants. Descriptive statistics for each

CLBS-1 item are displayed in Table 4.9.

Table 4. 9

Descriptive Statistics

		N	Mean	Std. Deviation	Variance
Descriptive Statistics					
1.	I attempt to understand the sociopolitical systems in which we operate.	316	5.77	1.002	1.004
2.	I ask myself "Whose voices are heard and whose are missing?" when reading texts.	316	5.56	1.257	1.581
3.	I analyze the biased language in the texts I read.	316	5.74	1.084	1.175
4.	I analyze how people are portrayed in texts.	316	5.97	.930	.865
5.	I try to understand the perspectives of others who are different from me.	316	6.43	.763	.582
6.	I believe my view of teaching literacy is shaped by how I was taught as a K-12 student.	316	5.09	1.505	2.265
7.	I believe my view of teaching literacy is shaped by how I am/was taught at university.	316	5.72	1.162	1.351
8.	I believe that my view of teaching literacy is shaped by other classroom teaching experiences.	316	5.75	1.009	1.018
9.	I believe that sociopolitical issues shape my view of teaching literacy.	316	5.37	1.219	1.486
10.	I form my opinions on teaching literacy based on multiple perspectives.	316	5.97	.808	.653
11.	I feel confident in teaching students from different ethnicities and cultures through critical literacy practices.	316	5.59	1.196	1.431
12.	I feel confident in teaching students with different learning abilities (dyslexia, Asperger, Autism, etc.) through critical literacy practices.	316	5.00	1.476	2.178
13.	I feel confident in teaching students of different socioeconomic backgrounds through critical literacy practices.	316	5.93	.965	.931
14.	I feel confident in teaching immigrant and refugee students through critical literacy practices.	316	5.42	1.264	1.597
15.	I can support students in examining their positionality in texts through critical literacy practices.	316	5.54	1.082	1.170
16.	I believe that teaching literacy is a sociopolitical act.	316	5.01	1.410	1.987
17.	I believe that teaching literacy is a form of social activism.	316	5.32	1.424	2.027

18. I seek out texts to use when teaching literacy where my students can reflect on social justice topics (e.g., race, class, poverty, homelessness, gender, etc.)	316	5.64	1.308	1.710
19. I work on developing my view of teaching literacy with social justice in mind.	316	5.52	1.339	1.793
20. I seek out resources outside my teaching program to help me learn more about critical literacy.	316	5.43	1.359	1.846
21. I seek out diverse children's literature to share with my students.	316	5.95	1.052	1.106
22. I take action in my community to promote social justice.	316	5.07	1.333	1.777
23. I am developing lessons with critical literacy in mind.	316	5.57	1.106	1.224
24. I try to put my view of social justice into practice.	316	5.17	1.497	2.242
Valid N (listwise)	316			

Histogram Visuals of Items 5, 12, and 16

In the following section, the histograms of items are presented. Three items are included that represent responses that are skewed to the right (MP2 histogram), responses that are skewed to the left (MP5 histogram), and one representing a close to a normal distribution (DC4 histogram). The visual comparison of all items is included in Appendix F. Below, I present the histograms for three items.
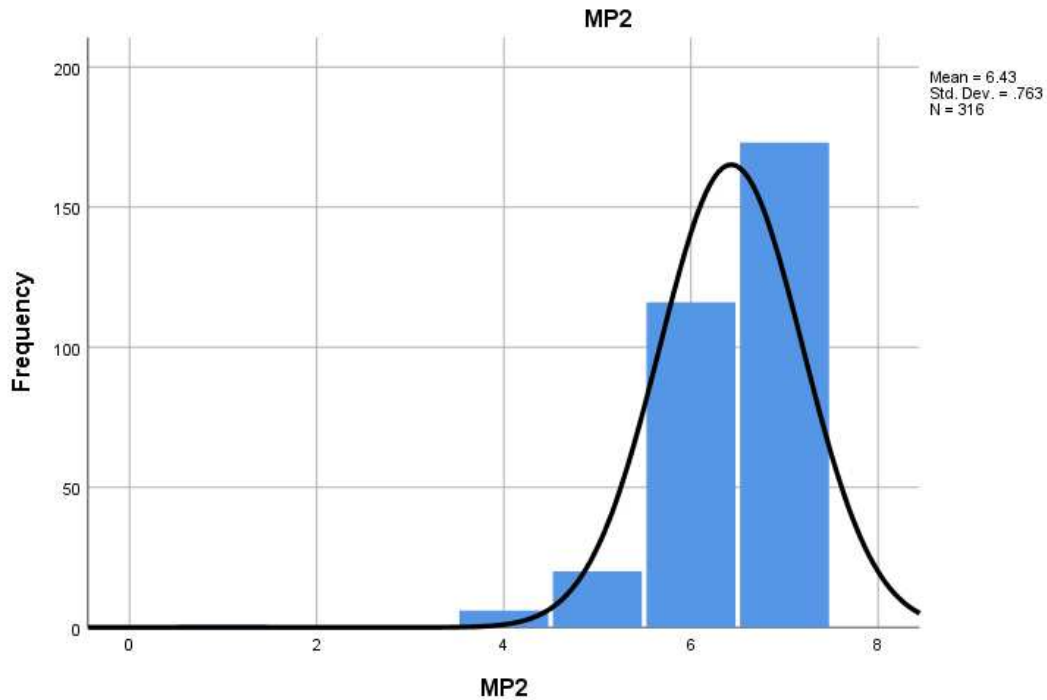
Figure 4. 2. Item 5 Histogram

Note. Histogram representation of responses to item, *I try to understand the perspectives of others who are different from me.* MP2 (Multiple Perspectives) is the dimension code for item 5 on the CLBS-1 instrument.

The highest mean, 6.43, was for item 5, *I try to understand the perspectives of others who are different from me*, and the variance was .582; therefore, the responses for item 5 denote that most pre-service teachers selected agree and strongly agree, forming a right-tailed distribution. The histogram for item 5 is right tailed; see Figure 4.2.
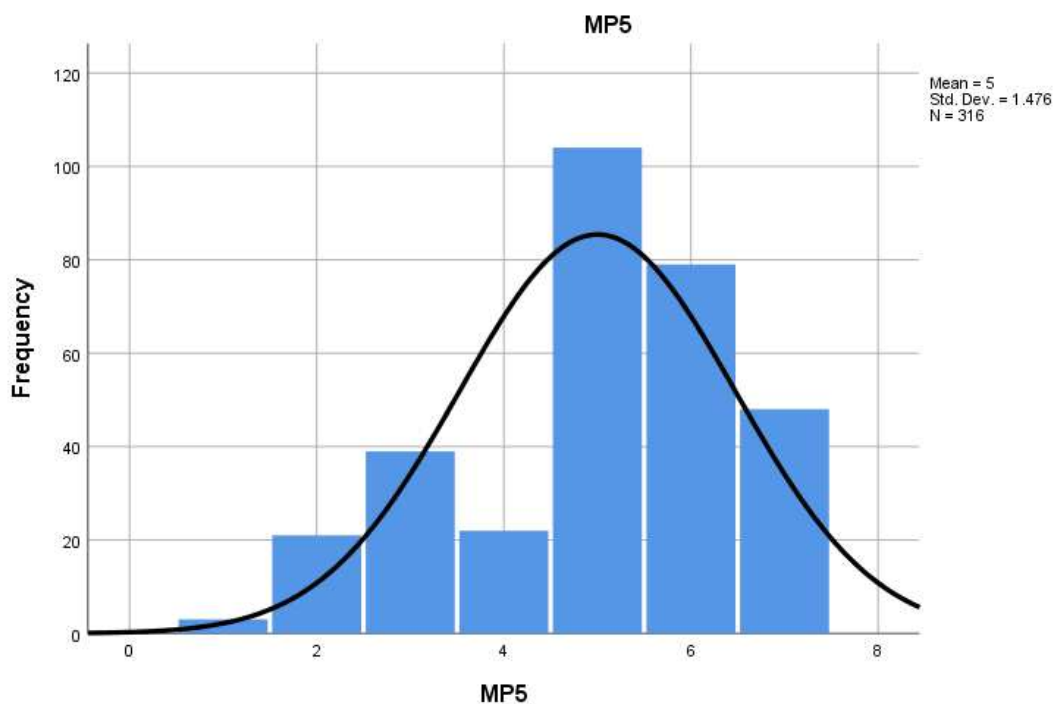
Figure 4. 3. Item 12 Histogram

Note. Histogram representation of responses to item, *I feel confident in teaching students with different learning abilities (dyslexia, Asperger, Autism, etc.) through critical literacy practices.* MP5 (Multiple Perspectives) is the dimension code for item 12 on the CLBS-1 instrument.

The lowest mean, 5.0, was item 12, *I feel confident in teaching students with different learning abilities (dyslexia, Asperger, Autism, etc.) through critical literacy practices*, with a variance of 2.178. The scores for the mean and the variance denote that this item had the most strongly disagree, disagree, and somewhat disagree responses. The histogram for item 12 is left tailed; see Figure 4.3.
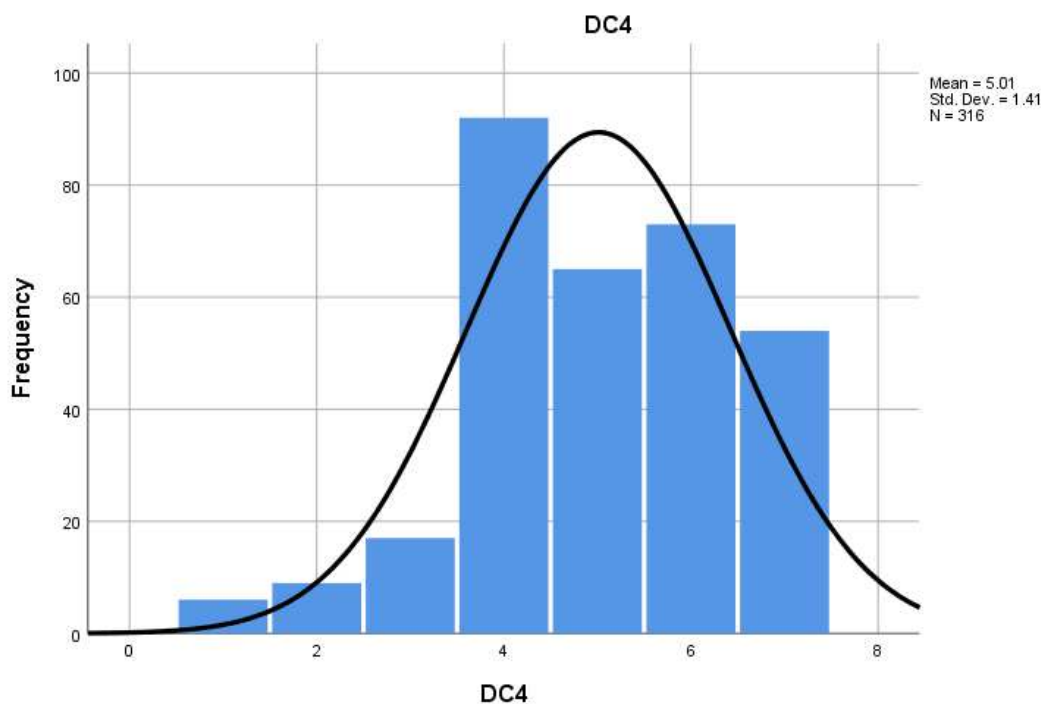
Figure 4. 4. Item 16 Histogram

Note. Histogram representation of responses to item, *I believe that teaching literacy is a sociopolitical act*. DC4 (Disrupting the Commonplace) is the dimension code for item 16 on the CLBS-1 instrument.

The histogram visual for item 16, *I believe that teaching literacy is a sociopolitical act*, with a mean, 5.01 and variance of 1.987, showed data distribution that came the closest to a normal distribution of all the CLBS-1 items (*n*=24). The majority of the responses to item 16 bunched around the middle of the response scale. The histogram for item 16 is shown in Figure 4.4.

Reliability of CLBS-1 Instrument

Table 4.10 showcases the Cronbach's alpha value of .887, which indicated a high level of internal consistency of the scale items with this specific sample. Based on the Cronbach's alpha assessment by DeVellis (2016), this instrument had a very good internal consistency of the items.

Table 4. 10

Reliability Statistics (Cronbach's Alpha)

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.887	.891	24

Item-Total Statistics

Table 4.11 presents the value of the Cronbach's alpha coefficient if I were to remove individual items from the CLBS-1 instrument. With the deletion of item 6 (SP2), *I believe my view of teaching literacy is shaped by how I was taught as a K-12 student*, the Cronbach's alpha coefficient increased from .887 to .897. Except for item 6, the deletion of any other item would result in lowering the Cronbach's alpha coefficient. Removal of item SP2 would contribute to a small improvement in the internal consistency of the instrument, as this was also evident from the low value of (-.004) of the Corrected Item-Total Correlation.

Table 4. 11

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
		Item-Total Statistics			
SP1	127.75	218.956	.435	.345	.883
MP1	127.96	210.221	.578	.522	.879
DC1	127.78	217.318	.449	.489	.883
DC2	127.55	220.286	.424	.337	.883
MP2	127.09	225.167	.310	.215	.886
SP2	128.43	230.773	-.004	.091	.897
SP3	127.80	216.879	.427	.340	.883
SP4	127.77	220.002	.396	.312	.884
SP5	128.15	210.188	.599	.520	.879
MP3	127.55	219.550	.529	.416	.882
MP4	127.93	214.919	.471	.616	.882
MP5	128.52	215.400	.353	.525	.886
MP6	127.59	220.046	.415	.585	.884
MP7	128.10	214.876	.442	.622	.883
DC3	127.98	215.650	.505	.438	.881
DC4	128.51	210.943	.487	.539	.882
DC5	128.20	207.032	.581	.610	.879
TA1	127.88	205.309	.690	.638	.876
TA2	128.00	205.848	.656	.691	.877
TA3	128.09	211.412	.496	.385	.882
TA4	127.57	216.627	.489	.458	.882
TA5	128.45	209.264	.566	.433	.879
TA6	127.95	213.836	.550	.392	.880
TA7	128.35	207.416	.538	.510	.880

Note. SP stands for Focusing on the Sociopolitical, MP stands for Interrogating Multiple Perspectives, DC stands for Disrupting the Commonplace, and TA stands for Taking Action for Social Justice. See Table 4.13 for a complete item list of the four critical literacy dimensions (Lewison et al., 2002).

In the preliminary analysis, I calculated the means, medians, and standard deviations of the CLBS-1 items in the scale to understand the data better. I then generated the inter-item correlation, item-total statistics, eigenvalues, and scree plot. The KMO and Bartlett's Test

establish correlations to assess item suitability and multicollinearity; see Table 4.12. The

generated KMO value indicated that the sampling adequacy was .887, and it was statistically

significant (*p*<.000).

Table 4. 12

KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.887
Bartlett's Test of Sphericity	Approx. Chi-Square	3208.876
	df	276
	Sig.	.000

Confirmatory Factor Analysis of CLBS-1 Instrument

Confirmatory factor analysis (CFA) is a multivariate statistical procedure used to

study whether the data or the measured variables represent the hypothesized factor structure

(Johnson & Morgan, 2016). In this study, CFA was used to examine if "the factor structure of

the scale was consistent with the construct's theorized structure" (Johnson & Morgan, 2016,

p. 132). The hypothesized factor structure, or model, represents the researcher's theoretical

sampling of a construct the model is trying to measure (Brown, 2014). Using a qualitative

framework of the latent construct, critical literacy (Lewison et al., 2002), I created an

instrument (CLBS-1) and validated it quantitatively using a CFA. The validation process

generated a scale that comprises three factors representing critical literacy.

The CLBS-1 instrument comprised four factors: focusing on the sociopolitical,

interrogating multiple perspectives, disrupting the commonplace, and taking action for social

justice. To apply Lewison and colleagues' (2002) framework to a larger sample, I created an

instrument administered to pre-service teachers across the United States. The self-report

instrument contained 32 items, out of which 24 were content items relating to the critical

literacy dimensions (see Table 4.13), eight were demographic items, and two were procedural. The aim of the project was to validate the CLBS-1 instrument and establish the factor structure comprising the four critical literacy dimensions put forth by Lewison et al. (2002). Below, in Table 4.13, the original CLBS-1 instrument is presented before the CFA and model modifications took place.

Table 4. 13

Original CLBS-1 Instrument Items

CLBS-1 Item	CLBS-1 Content Items	Item Code per Dimension
Item 1	I attempt to understand the sociopolitical systems in which we operate.	SP1
Item 2	I ask myself "Whose voices are heard and whose are missing?" when reading texts.	MP1
Item 3	I analyze the biased language in the texts I read.	DC1
Item 4	I analyze how people are portrayed in texts.	DC2
Item 5	I try to understand the perspectives of others who are different from me.	MP2
Item 6	I believe my view of teaching literacy is shaped by how I was taught as a K-12 student.	SP2
Item 7	I believe my view of teaching literacy is shaped by how I am/was taught at university.	SP3
Item 8	I believe that my view of teaching literacy is shaped by other classroom teaching experiences.	SP4
Item 9	I believe that sociopolitical issues shape my view of teaching literacy.	SP5
Item 10	I form my opinions on teaching literacy based on multiple perspectives.	MP3
Item 11	I feel confident in teaching students from different ethnicities and cultures through critical literacy practices.	MP4
Item 12	I feel confident in teaching students with different learning abilities (dyslexia, Asperger, Autism, etc.) through critical literacy practices.	MP5
Item 13	I feel confident in teaching students of different socioeconomic backgrounds through critical literacy practices.	MP6
Item 14	I feel confident in teaching immigrant and refugee students through critical literacy practices.	MP7
Item 15	I can support students in examining their positionality in texts through critical literacy practices.	DC3
Item 16	I believe that teaching literacy is a sociopolitical act.	DC4
Item 17	I believe that teaching literacy is a form of social activism.	DC5
Item 18	I seek out texts to use when teaching literacy where my students can reflect on social justice topics (e.g., race, class, poverty, homelessness, gender, etc.)	TA1
Item 19	I work on developing my view of teaching literacy with social justice in mind.	TA2

Item 20	I seek out resources outside my teaching program to help me learn more about critical literacy.	TA3
Item 21	I seek out diverse children's literature to share with my students.	TA4
Item 22	I take action in my community to promote social justice.	TA5
Item 23	I am developing lessons with critical literacy in mind.	TA6
Item 24	I try to put my view of social justice into practice.	TA7

Confirmatory Factor Analysis Overview

CFA was used to determine the goodness of fit and item loading on assigned factors. The initial model is presented in Figure 4.5. First, I removed items with lower and nonsignificant factor loading. Next, I determined how strongly the four factors represented the latent construct of critical literacy. I found that while SP (focusing on the sociopolitical), DC (disrupting the commonplace), and TA (taking action for social justice) explained the model well, MP (interrogating multiple perspectives) was considerably weaker in model representation. One item, MP2, conceptualized based on the critical literacy framework (Lewison et al., 2002), did not load on the a priori factor (Multiple Perspectives) but on another factor (Focusing on the Sociopolitical), meaning that in the pattern of participant answering this item aligned with multiple factors. Once all the areas of ill strain were established, three items with low factor loading and high loading on other factors were removed (MP1, MP2, and SP2). Then, I ran CFA was again. I determined the model fit based on the following guidelines: a non-significant $\chi 2$ test, the Standardized Root Mean Square Residual (RMSEA) < 0.06, the comparative fit index (CFI) or the Tucker-Lewis index (TLI) > 0.90, and the root mean square error of approximation (SRMR) < 0.08 (Hu & Bentler, 1999).
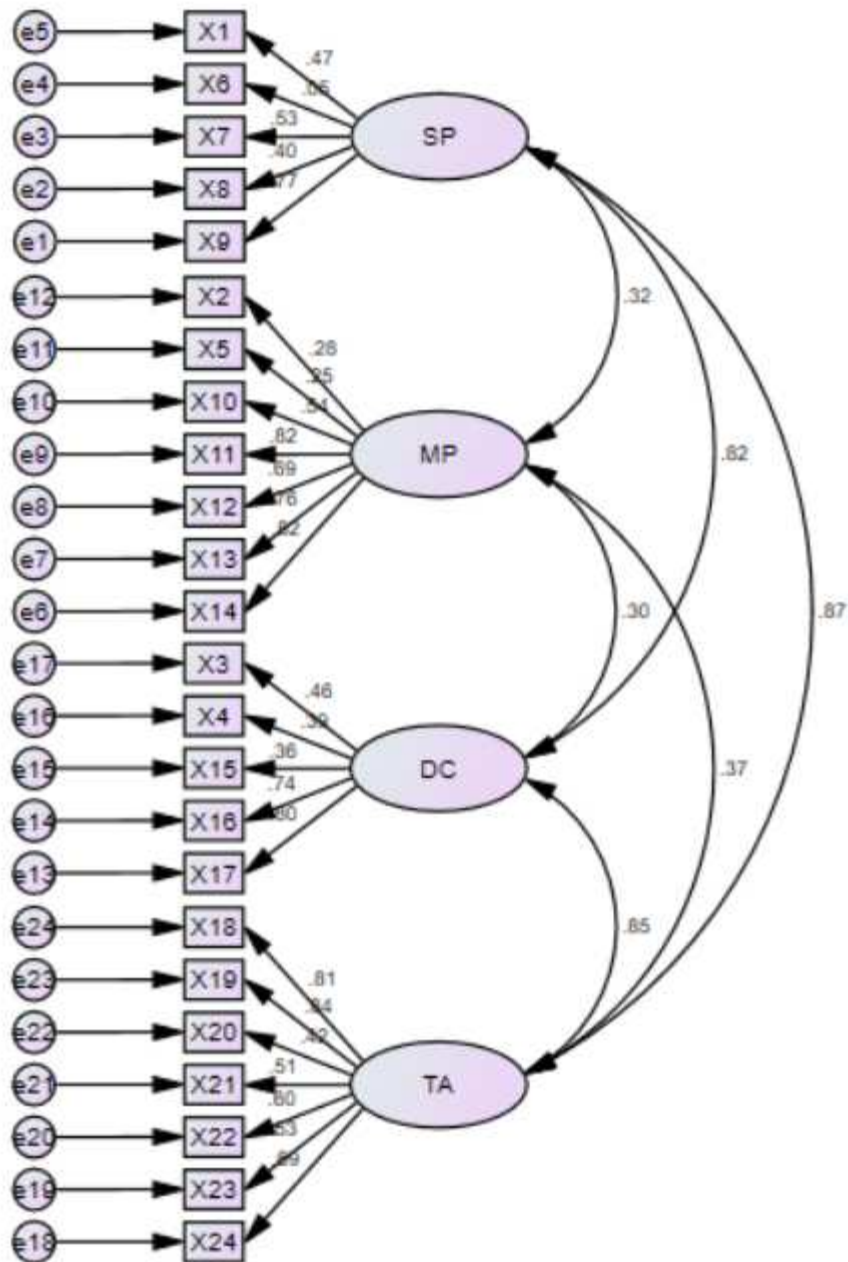
Figure 4. 5. CFA Model Results 1

Note. Original Model Results where item x1 is SP1, x6 is SP2, x7 is SP3, x8 is SP4, x9 is SP5, x2 is MP1, x5 is

MP2, x10 is MP3, x11 is MP4, x12 is MP5, x13 is MP6, x14 is MP7, x3 is DC1, x4 is DC2, x15 is DC3, x16 is

DC4, x17 is DC5, x18 is TA1, x19 is TA2, x20 is TA3, x21 is TA4, x22 is TA5, x23 is TA6, and x24 is TA7.

The final model conceptualizing the CLBS-1 scale based on the a priori structure of the three critical literacy dimensions had **(**CFI = .93, TLI = .91, RMSEA = .09, SRMR = .05). Using Cronbach's alpha, the reliability of the CLBS-1 scale was α = .887. These are promising results that demonstrate the validity and reliability of the CLBS-1 instrument.

Confirmatory Factor Analysis Stages

I performed a CFA to examine how well the model represented the latent variables (factors) created to operationalize the critical literacy construct. The model fit was assessed using the following guideline: the initial goodness-of-fit test is favorable when values approach 1.00 (Brown, 2015). In Mplus, I generated the output standardized parameter to estimate standardized values in addition to the default unstandardized values. Next, Mplus tested how the proposed model of critical literacy fits the data gathered with the CLBS-1 scale from the sample of pre-service teachers (*n*=316). Using maximum likelihood, I analyzed the items to evaluate how well they represented the assigned latent variable (construct). The initial run of the CFA indicated that the resulting scale specified a weak model fit (CFI = .73, TLI = .70, RMSEA = .10, SRMR =.12).

The model was evaluated for areas of ill strain, such as for items that loaded lower than .30 to assess if the items were loading significantly on the factors at all. Item SP2 did not load significantly to the SP factor as p=.389 where p>.05. Concurrent with the Cronbach's alpha coefficient, if I were to remove individual items from the CLBS-1 instrument such as SP2, *I believe my view of teaching literacy is shaped by how I was taught as a K-12 student*, the Cronbach's alpha coefficient increases from .887 to .897 and so improves the model fit. Similarly, the CFA established that SP2 is the weakest item, and it was removed for the second run of CFA. Other items with lower factor loading than .30 were also removed and

those included: MP1 where the standardized loading was .28, for MP2 it was .25, and for SP2

it was .05. The remaining items were loading significantly at p<.05, as can be observed from

Table 4.13. Next, I analyzed if the items were loading strongly enough; see Table 4.13. I

examined the extent to which the latent construct of critical literacy was related to the

subscales as defined. From the CFA, it was evident that the SP's standardized loading, which

standardizes both the measured variables and factor loadings, was .91, for DC it was .89, and

for TA it was .98, showing that the latent variables (SP, DC, and TA) were strongly connected

to this latent characteristic, entitled Critical Literacy (CL). However, MP did not strongly

connect to CL, where the standardized loading was .37. From the analysis, I determined that

MP as a latent variable was much weaker compared to the other latent variables (SP, DC, and

TA), meaning that by changing pre-service teachers' critical literacy beliefs, it was likelier to

shape the SP, DC, and TA at a higher level than the MP. Though MP's loading was weaker

once compared to the other three factors, it did not mean it was not important. From a

theoretical standpoint, the underlying construct of MP could be a composite factor in all

dimensions (Lewison et al., 2002).

Then, I looked at Modification Indices, specifically the "By" Statements, to establish

if the items correspond with their assigned factors. The "By" Statements specify the

correlated variables as factor indicators (SP, MP, DC, and TA) of the critical literacy

construct. The "BY" statements indicated that the SP factor was measured by the following

indicators, SP1, SP2, SP3, SP4, and SP5; the factor MP was measured by MP1, MP2, MP3,

MP4, MP6, and MP7; the factor DC was measured by DC1, DC2, DC3, DC4, and DC5; and

the factor TA was measured by TA1, TA2, TA3, TA4, TA5, TA6, and TA7. Higher values in

the Modification Indices showed that allowing item exemption will increase item loading and

improve model quality (Brown & Moore, 2015). The Minimum M.I. values indicated that item MP1 was loading on all factors, meaning that in the pattern of participants' answering, the item aligned with all four factors and not the assigned one (Brown, 2014). As a result, I removed MP1 because it did not focus on the assigned construct.

Based on the critical literacy framework (Lewison et al., 2002), the item, MP2, *I ask myself Whose voices are heard and whose are missing? when reading texts*, coded under the dimension entitled Multiple Perspectives, when analyzed through CFA, loaded strongly onto another dimension, Focusing on the Sociopolitical, where the Minimum M.I. value was 86.6. While I could find quantitative evidence in the data for this modification, I could not theoretically justify transposing the item, MP2, into a different latent variable. Hence, I did not make this change in the second model run.

Certain items loaded onto one construct, showing that the variance between the items was the larger construct; this did not allow for the items to correlate outside of that relationship within the model (Brown, 2015). For example, the assumption is that the survey items in factor SP will correlate because they are assessing the same factor. The "With" Statements indicate that items should be allowed to correlate outside of that factor, and if so, the model will improve (Muthén & Muthén, 2019). If adjustments are made based on the "With" statements, the researcher affirms an underlying commonality in items from the data and not from the measured construct. This commonality may stem from the similarities in the item wording (Brown & Moore, 2015). The goal was to have items correlate because of the common factor being measured and not because of the similar item wording. The item wording can lead to participants answering items in similar ways, outside of the measured construct (Brown, 2014). In this specific case, the "With" statements indicated a correlation

between the measurement error variances and not the variables. For that reason, I chose not to make modifications based on the "With" Statements.

In the second CFA run, I re-coded the model to include the modifications reflecting the removal of the non-significant and weaker items, which were MP1, MP2, and SP2. With the removal of the weaker items, the quality of the model fit improved across all categories (CFI = .79, TLI = .78, RMSEA = .10, SRMR =.11). All of the items were loading significantly and strongly to the assigned factors. However, the CFA analysis denoted some item loading issues in the latent variable MP; see Table 4.14.

Table 4. 14

CFA Standardized Model Output 1

STANDARDIZED MODEL RESULTS			
			Two-Tailed
	Loading	S.E.	*P-Value
SP　BY			
SP1	0.469	0.051	0.000
SP2	0.053	0.062	0.389
SP3	0.528	0.047	0.000
SP4	0.406	0.054	0.000
SP5	0.774	0.035	0.000
MP　BY			
MP1	0.279	0.057	0.000
MP2	0.251	0.057	0.000
MP3	0.546	0.044	0.000
MP4	0.823	0.025	0.000
MP5	0.688	0.034	0.000
MP6	0.760	0.029	0.000
MP7	0.817	0.025	0.000
DC　BY			
DC1	0.466	0.051	0.000
DC2	0.391	0.056	0.000
DC3	0.366	0.056	0.000
DC4	0.733	0.037	0.000
DC5	0.797	0.033	0.000
TA　BY			
TA1	0.813	0.023	0.000

TA2	0.841	0.021	0.000
TA3	0.419	0.050	0.000
TA4	0.507	0.046	0.000
TA5	0.601	0.039	0.000
TA6	0.522	0.045	0.000
TA7	0.694	0.033	0.000

CL   BY

|			
SP	0.912	0.036	0.000
MP	0.366	0.058	0.000
DC	0.891	0.036	0.000
TA	0.958	0.026	0.000
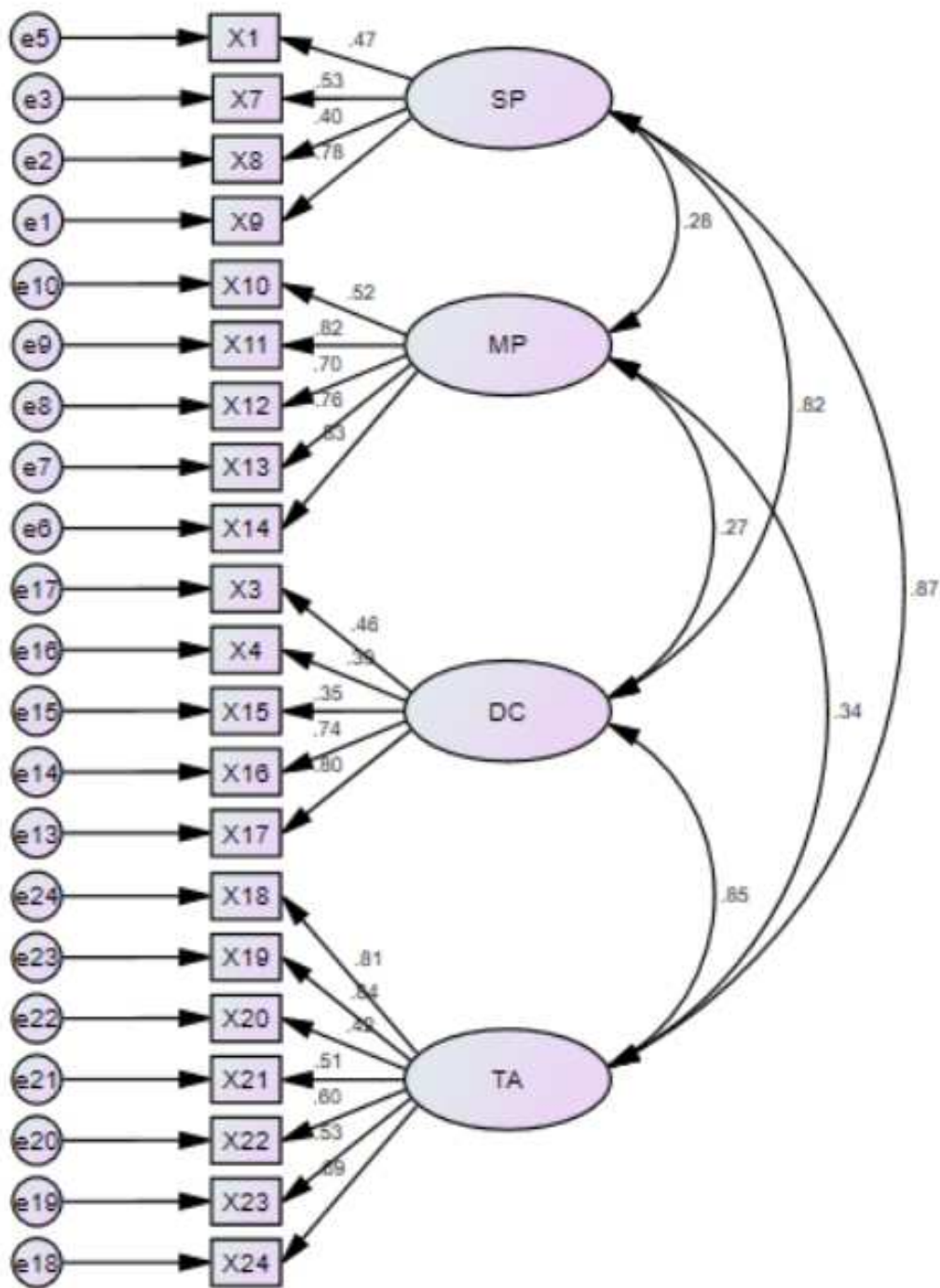
Figure 4. 6. CFA Model Results 2

Note. Model Results where item x1 is SP1, x7 is SP3, x8 is SP4, x9 is SP5, x10 is MP3, x11 is MP4, x12 is

MP5, x13 is MP6, x14 is MP7, x3 is DC1, x4 is DC2, x15 is DC3, x16 is DC4, x17 is DC5, x18 is TA1, x19 is

TA2, x20 is TA3, x21 is TA4, x22 is TA5, x23 is TA6, and x24 is TA7.

Table 4. 15

CFA Standardized Model Output 2

	STANDARDIZED MODEL RESULTS		
Two-Tailed			
	Loading	S.E.	*P-Value
SP BY			
SP1	0.468	0.051	0.000
SP3	0.527	0.047	0.000
SP4	0.403	0.054	0.000
SP5	0.775	0.035	0.000
MP BY			
MP3	0.521	0.046	0.000
MP4	0.818	0.025	0.000
MP5	0.697	0.034	0.000
MP6	0.761	0.029	0.000
MP7	0.833	0.024	0.000
DC BY			
DC1	0.464	0.051	0.000
DC2	0.389	0.056	0.000
DC3	0.364	0.056	0.000
DC4	0.734	0.036	0.000
DC5	0.798	0.033	0.000
TA BY			
TA1	0.813	0.023	0.000
TA2	0.842	0.021	0.000
TA3	0.417	0.050	0.000
TA4	0.506	0.046	0.000
TA5	0.600	0.039	0.000
TA6	0.521	0.045	0.000
TA7	0.694	0.033	0.000
CL BY			
SP	0.913	0.036	0.000
MP	0.331	0.059	0.000
DC	0.890	0.036	0.000
TA	0.958	0.026	0.000

In the third CFA run, I tested the model without the latent variable MP and the model fit showed improvement (CFI = .81, TLI = .78, RMSEA = .08, SRMR = 0.10); see Table 4.15 and Figure 4.7. One reason for the model improvement was the omission of the factor MP.

Lewison et al. explained that educators who take action for social justice are already inclined to explore multiple perspectives when enacting their critical literacy beliefs. As Lewison et al. (2002) argued that, "This dimension [taking action for social justice] is often perceived as the definition of critical literacy-yet one cannot take informed action against oppression or promote social justice without expanding understandings and perspectives gained from the other three dimensions" (pp. 383-384). This finding from the critical literacy literature justified the factor omission.
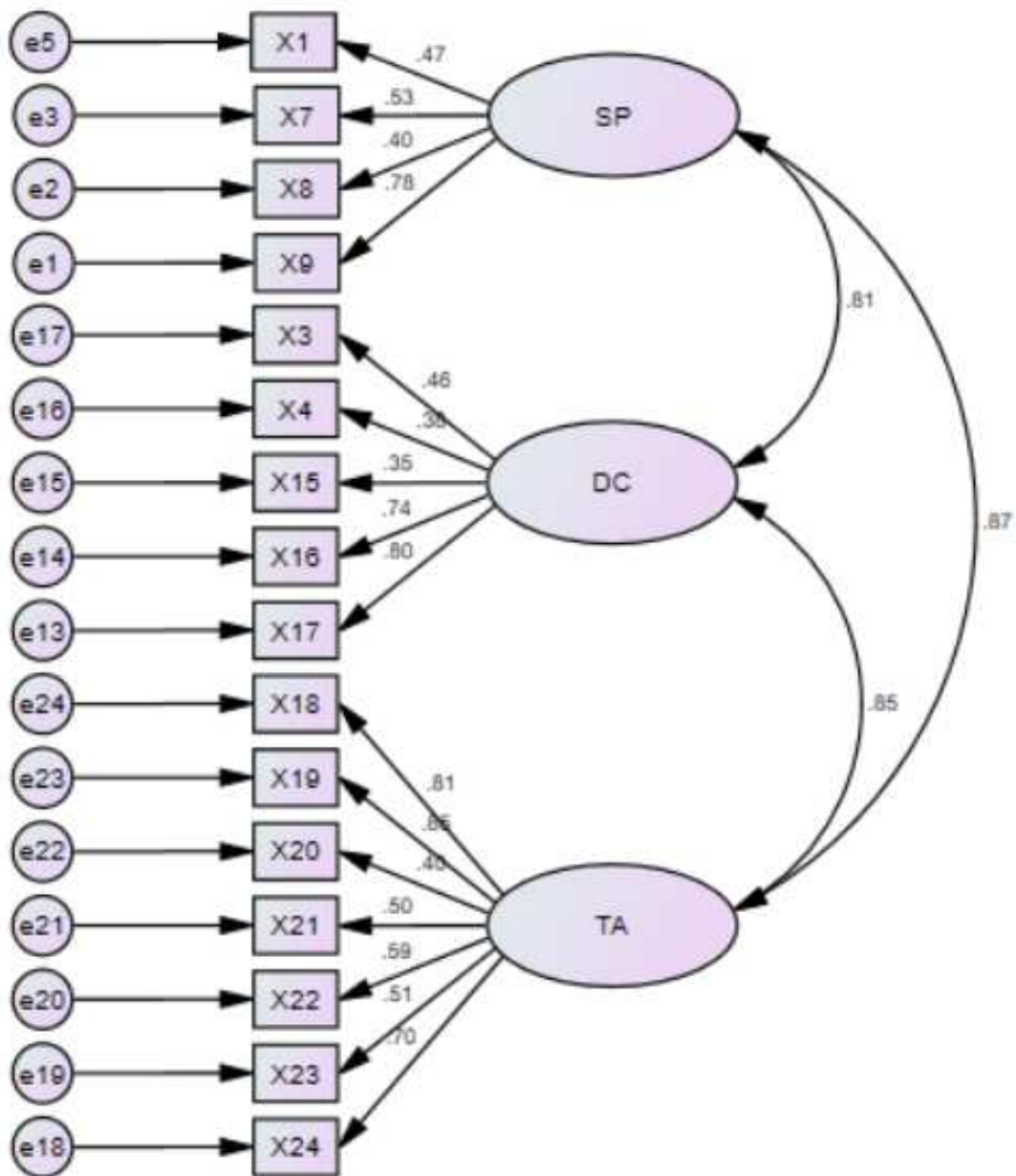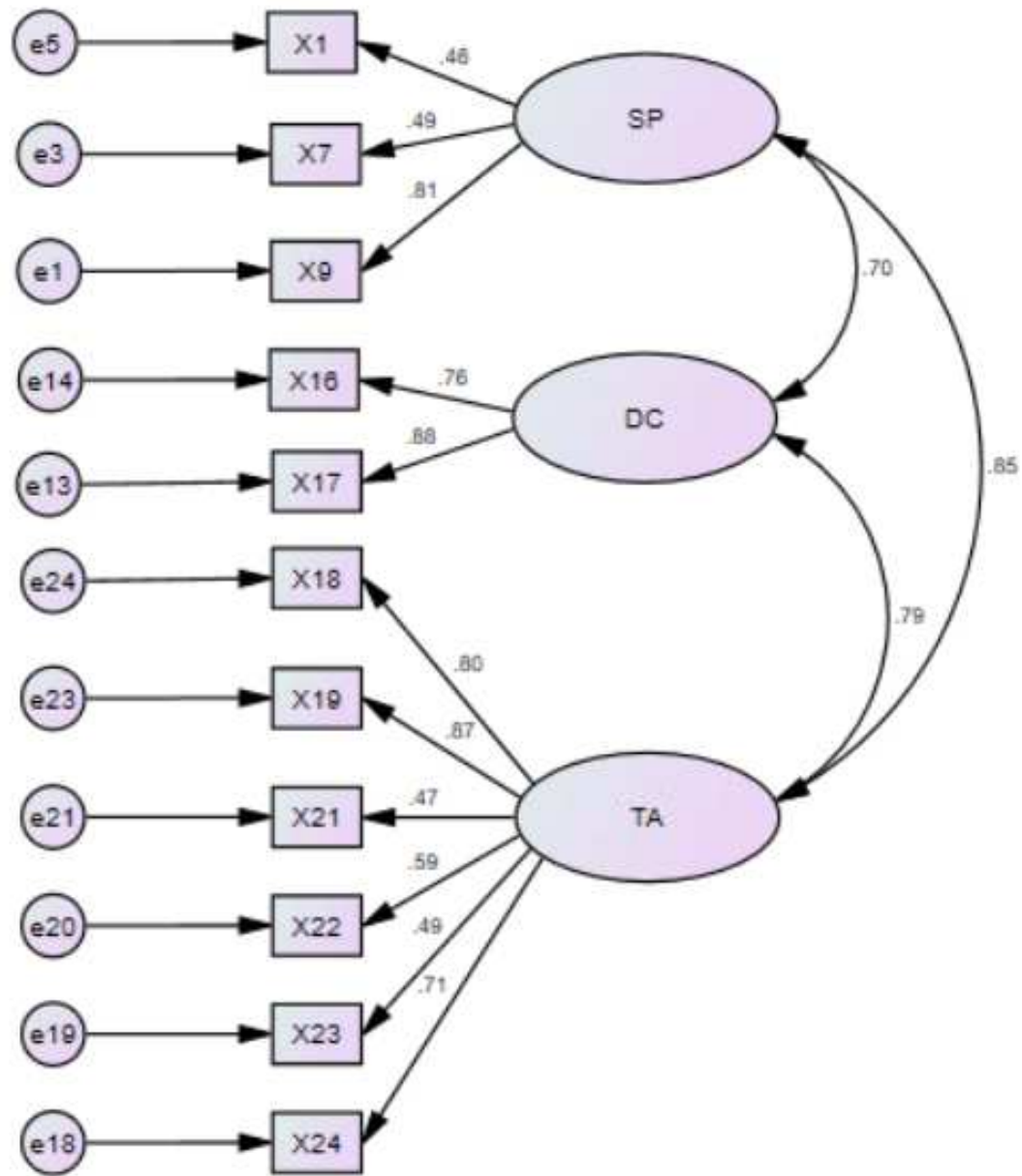
Figure 4. 7. CFA Model Results 3

Note. Model Results where item x1 is SP1, x7 is SP3, x8 is SP4, x9 is SP5, x3 is DC1, x4 is DC2, x15 is DC3, x16 is DC4, x17 is DC5, x18 is TA1, x19 is TA2, x20 is TA3, x21 is TA4, x22 is TA5, x23 is TA6, and x24 is TA7.

Table 4. 16

CFA Standardized Model Output 3

STANDARDIZED MODEL RESULTS			
			Two-Tailed
	Loading	S.E.	*P-Value
SP BY			
SP1	0.466	0.051	0.000
SP3	0.527	0.047	0.000
SP4	0.398	0.054	0.000
SP5	0.779	0.034	0.000
DC BY			
DC1	0.460	0.051	0.000
DC2	0.382	0.055	0.000
DC3	0.348	0.056	0.000
DC4	0.742	0.035	0.000
DC5	0.804	0.031	0.000
TA BY			
TA1	0.813	0.024	0.000
TA2	0.850	0.021	0.000
TA3	0.405	0.051	0.000
TA4	0.498	0.046	0.000
TA5	0.594	0.040	0.000
TA6	0.512	0.045	0.000
TA7	0.698	0.032	0.000
CL BY			
SP	0.914	0.036	0.000
DC	0.890	0.035	0.000
TA	0.953	0.027	0.000

In the fourth and final run of CFA, I extracted the weaker factor loadings, x8 or SP4, x3 or DC1, x4 or DC2, x15 or DC3, and x20 or TA3; see Table 4.16 and Figure 4.8. These items had factor loadings significantly lower than the other variables in the model. With this extraction, the model fit significantly improved (CFI = .93, TLI = .91, RMSEA = .09, SRMR = .05).

Figure 4. 8. CFA Model Results 4

Note. Model Results where item x1 is SP1, x7 is SP3, x9 is SP5, x16 is DC4, x17 is DC5, x18 is TA1, x19 is

TA2, x21 is TA4, x22 is TA5, x23 is TA6, and x24 is TA7.

Summary of Results

After four runs of CFA, an RMSEA value was generated that was above the recommended limit of .06, specifying a mediocre fit. The CFI index was 0.93, and the TLI index was 0.91, both approaching the recommended guidelines of 0.95 and 0.90 for model fit, respectively. While the modified model fits the data better than the original model, the value of .09 for the RMSEA recommends model improvement with multiple iterations and larger samples of pre-service teachers. The model modifications, eliminating the weaker variable loadings and the MP latent variable, were justified by critical literacy literature (Lewison et al., 2002) and informed by the CFA. I decided not to pursue further model modifications because the results will become more specific to the data obtained from the sample; this minimizes the possibility to generalize the data to other sample groups of the population. The finalized scale is showcased in Appendix G. This study documents the first attempt to operationalize and measure pre-service teachers' critical literacy beliefs based on the critical literacy framework by Lewison et al. (2002). Additional model iterations with other sample groups of participants will benefit the further refinement of the instrument and result in a better model fit.

Summary

The CLBS-1 survey collected data from 405 pre-service teachers in the United States on their critical literacy beliefs. CFA was used to render the critical literacy model (as an a priori structure model for critical literacy) into the CLBS-1 instrument. With the CLBS-1 instrument, I explored how the four critical literacy dimensions (Lewison et al., 2002) represent pre-service teachers' beliefs. I also examined the relationship between participants' demographic variables such as age, gender identity, field of study, and teaching experiences

with their critical literacy beliefs. CFA was also employed to assess the reliability and validity of the instrument. The factors extracted with the CFA matched the critical literacy framework proposed by Lewison et al. (2002). The CFA established that the three dimensions of critical literacy, focusing on the sociopolitical, disrupting the commonplace, and taking action for social justice, represent the critical literacy construct once tested with a larger sample of pre-service teachers. Teacher educators and pre-service teachers can use the CLBS-1 instrument to survey pre-service teachers on critical literacy in their teaching programs.

CHAPTER 5: DISCUSSION AND CONCLUSION

Introduction

This study employed quantitative methods to answer the principal research question: To what extent does the Critical Literacy Beliefs Survey (CLBS-1) represent the hypothesized dimensions of critical literacy found in the literature? The findings revealed that the CLBS-1 instrument was a promising model to survey pre-service teachers on their critical literacy beliefs. The findings are limited to the purposeful sample of pre-service teachers who completed the survey.

Lewison et al.'s (2002) critical literacy framework was conceptualized as an instrument that was piloted across the United States with a sample of pre-service teachers (N=405). Unlike the critical literacy framework that involves four factors, the CFA results demonstrated that the CLBS-1 instrument involves three factors. These factors are focusing on the sociopolitical, disrupting the commonplace, and taking action for social justice.

This study detailed the validation of the critical literacy construct, conceptualized as a scale to collect data on pre-service teachers' critical literacy beliefs. In this chapter, conclusions, implications, and recommendations from the findings are presented and discussed.

Summary and Discussion of Findings

Using a qualitative framework of critical literacy (Lewison et al., 2002), I created a critical literacy instrument (CLBS-1) that was validated quantitatively. The validated scale comprises 11 measured variables and three factors: focusing on the sociopolitical, disrupting the commonplace, and taking action for social justice; see Figure 5.1.

Figure 5. 1. Critical Literacy Factors

Comparison of Individual CLBS-1 Item Responses to Findings in the Critical Literacy Literature

Below, I share highlights regarding two critical literacy dimensions (disrupting the commonplace and taking action for social justice). Concurrent with the findings from the pilot study, pre-service teachers expressed interest in social justice practices as evidenced by their responses to item 24, *I try to put my view of social justice into practice,* to which pre-service teachers responded with the following (Strongly disagree 2.53%, Disagree 5.70% Somewhat disagree 3.48%, Neither agree nor disagree 16.77%, Somewhat agree 21.84%, Agree 31.65%, and Strongly agree 18.04%). Another case in point was pre-service teachers' responses to item 19*, I work on developing my view of teaching literacy with social justice in mind,* to which pre-service teachers responded with the following (Strongly disagree 1.88%, Disagree,

2.50%, Somewhat disagree 2.50%, Neither agree nor disagree 10.94%, Somewhat agree 23.75%, Agree 34.06%, and Strongly agree 24.38%). In both cases, the highest frequency of participants responded with agree to items 24 with (31.65%) and 19 with (34.06%).

According to the apprenticeship of observation phenomenon (Lortie, 1975), pre-service teachers learn to teach through their own experiences with schooling. Concurrent with Lortie's findings, the highest frequency of pre-service teachers responded with agree to item 6, *I believe my view of teaching literacy is shaped by how I was taught as a K-12 student*. In fact, the highest frequency of participants (28.90%) attributed their views of teaching literacy to their experiences in K-12 schooling (Strongly disagree 1.16%, Disagree 5.78%, Somewhat disagree 11.27%, Neither agree nor disagree 8.67%, Somewhat agree 26.30%, Agree 28.90% and Strongly agree 17.92%).

Moreover, the highest frequency of participants (40.88%) responded with agree to item 7, *I believe my view of teaching literacy is shaped by how I am/was taught at university.* Participants expressed that university experiences with teacher mentors were valuable in their learning of teaching literacy (Strongly disagree 0.29%, Disagree 2.65%, Somewhat disagree 1.18%, Neither agree nor disagree 8.24%, Somewhat agree 21.47%, Agree 40.88%, and Strongly agree 25.29%).

Interestingly, the highest frequency of participants (48.24%) responded with agree to item 8, *I believe that my view of teaching literacy is shaped by other classroom teaching experiences* (*such as teaching practicums*). The pre-service teachers' responses demonstrated that practicum experiences are instrumental in shaping their views of teaching (Strongly disagree 0.00%, Disagree 1.47%, Somewhat disagree 1.18%, Neither agree nor disagree 7.65%, Somewhat agree 21.18%, Agree 48.24%, and Strongly agree 20.29%).

Another interesting finding relates to item 16, *I believe that teaching literacy is a sociopolitical act*, to which the highest frequency of pre-service teachers (29.50%) expressed indecisiveness (Strongly disagree 1.86%, Disagree 2.80%, Somewhat disagree 5.28%, Neither agree nor disagree 29.50%, Somewhat agree 20.19%, Agree 23.29%, and Strongly agree 17.08%). This finding warrants more surveying of pre-service teachers on their views of teaching critical literacy.

The highest frequency of pre-service teachers strongly agreed (Strongly disagree 0.00%, Disagree 0.31%, Somewhat disagree 1.25%, Neither agree nor disagree 10.31%, Somewhat agree 15.94%, Agree 35.63%, and Strongly agree 36.56%) with the statement expressed in item 21, *I seek out diverse children's literature to share with my students*. Pre-service teachers showed agency in exploring diverse children's literature in their preparation for teaching (Bishop 2014; Botelho & Rudman, 2009; Cho 2015; Iwai, 2017).

Critical literacy is conceptualized as taking action for social justice (Lewison et al., 2002). The highest frequency of pre-service teachers (30.38%) somewhat agreed (Strongly disagree 0.95%, Disagree 4.11%, Somewhat disagree 6.33%, Neither agree nor disagree 18.35%, Somewhat agree 30.38%, Agree 25.95%, Strongly agree 13.92%) with the statement expressed in item 22, *I take action in my community to promote social justice*. Such response was concurrent with the findings in the literature (Gustine, 2018; Karacabey et al., 2019; Ketter & Lewis, 2001; Kwong, 2020; Stallworth et al., 2006; Tican & Deniz, 2019; Vasquez et al., 2013; Xu & Brown, 2016). Overall, responses to CLBS-1 showed participants' strong favorability towards the construct.

Validity and Reliability of CLBS-1

Validity Analysis

According to DeVellis (2016), the acceptable Cronbach's alpha levels are between .60 and .65 deemed as not satisfactory, .65 and .70 – marginally acceptable, .70 and .80 – acceptable, and .80 and .90 – very good. The Cronbach's alpha for the CLBS-1 was .887, which indicated a high level of internal consistency of the scale items.

I performed CFA for construct validity to examine if the critical literacy construct, qualitative in nature, can be measured with the critical literacy scale and its respective factor structure (Johnson & Morgan, 2016). Drawing from Lewison and colleagues' (2002) four critical literacy dimensions (focusing on the sociopolitical, interrogating multiple perspectives, disrupting the commonplace, and taking action for social justice), I determined the a priori structure of the item scale; this meant I did not need to conduct an exploratory factor analysis (EFA) (Brown & Moore, 2015).

I assessed validity based on the following criteria: instrument construct, sampling processes, internal reliability of the instrument, instrument comparison to other established measurement scales, and consequences related to instrument use (American Educational Research Association et al., 2014). For content validity, I carefully reviewed the literature for the construct of critical literacy, guided by the framework put forth by Lewison and colleagues (2002). I adapted the critical literacy concepts into survey items for the target population (pre-service teachers). I also invited experts from the field to evaluate the survey scale for the construct sampling. I documented the review process and outcomes using google forms. Three expert panels reviewed the scale: two panels of critical literacy experts and one panel of pre-service teachers. Next, I conducted cognitive interviews with a sample of pre-

service teachers for item comprehensibility, readability, and sample appropriateness. I limited the scope of the construct domain adequately to pre-service teachers' understanding of critical literacy.

For response validity, I performed cognitive interviews with pre-service teachers to ensure that the items are adequate for the target population. During the cognitive interviews, I asked pre-service teachers to render the survey items in their own words for comprehension. For example, I asked, *Tell me what critical literacy means to you in your own words?*. By asking this question, I elicited pre-service teachers' descriptions of critical literacy practices and compared them to the concepts, constructs, and propositions in the critical literacy dimensions (Lewsion et al., 2002).

To evaluate the internal validity of the instrument, I performed a CFA. To ensure the internal validity, a few measurements were calculated (CFI = .93, TLI = .91, RMSEA = .09, SRMR = .05), and the number of items was reduced to 11. Because of the RMSEA value being greater than the threshold value of .05, the test of the RMSEA was not significant, meaning that the model needs to be re-tested with a new sample of participants. Moreover, the CFI value was slightly lower than the threshold value of CFI > .90, where .95 shows a good fit. The other two validity measures are discussed in the implications section concerning instrument comparison and the consequences related to instrument use.

In summary, instrument validity was established through content validity, construct validity, and criterion-related validity based on CFA standardized indices for instrument validation (Sireci, 2016). To ensure adequate construct sampling, I enlisted content area experts in the form of two expert panels, and I conducted cognitive interviews with representatives of the sampled population. As quantitative measurements of critical literacy

have not been published in peer-reviewed journals, I searched the literature for qualitative

frameworks of critical literacy, which I tested using CFA for construct validity. I did not

assess criterion-related validity because I could not find a peer-reviewed instrument that

measures critical literacy. The CLBS-1 instrument was evaluated based on model fit using

CFA indices: CFI, TLI, RMSEA, and SRMR.

Reliability Analysis

The Cronbach's alpha for the CLBS-1 instrument was .887, specifying a high level of

internal consistency in participants' responses (DeVellis, 2016). Regarding inter-rater

reliability, I examined the Item-Total Statistics, as well as the KMO and Bartlett's Test to

assess item suitability and multicollinearity. Reliability is discussed further in the limitations

section.

Significance of the Study

This study operationalized Lewison et al.'s (2002) critical literacy framework

consisting of four dimensions into a validated scale. Below, I overview the critical literacy

dimensions explored through the CLBS-1 instrument:

- Focusing on the sociopolitical entails questioning unequal power relationships within
  social structures.

- Interrogating multiple points of view centers on examining texts from different
  perspectives.

- Disrupting the commonplace entails an examination of master narratives through a
  cultural, political, and intertextual lens.

- Taking action for social justice involves social justice advocacy toward equity and
  equality.

During the pilot study interviews, pre-service teachers expressed the need for explicit critical literacy instruction through a step-by-step methodology (such as developing lessons) (Vasquez et al., 2013). Critical literacy instruction requires an instrument that can survey pre-service teachers' beliefs and identify critical literacy practices that require explicit instruction. The CLBS-1 instrument offers teacher educators and mentors insights into the critical literacy beliefs of pre-service teachers. Ultimately, this study aimed to examine if Lewison et al.'s (2002) framework, qualitative in nature, can be rendered into a quantitative measurement tool for surveying larger samples of pre-service teachers. The instrument was piloted with a sample of pre-service teachers whose critical literacy beliefs it was set out to measure. Hence, the initial goal of this study was met. While the findings cannot be generalized to the population as a whole, I have set in motion the research necessary to validate the instrument.

The majority of the participants' responses were skewed positively for all items, indicating a strong favorability towards the construct. As evident from the findings, the data do not differentiate between the quality of engaging in critical literacy practices and the level of enacting them but illustrate pre-service teachers' self-reported beliefs on the said actions. These results necessitate additional surveying of larger sample groups of pre-service teachers. The CLBS-1 can be used as a screening instrument to gauge the potential of engaging pre-service teachers' ideologies in critical literacy teaching and learning. Focusing on the sociopolitical, disrupting the commonplace, and taking action for social justice were significant factors in shaping pre-service teachers' critical literacy beliefs.

To provide a deeper understanding of pre-service teachers' beliefs, teacher educators and mentors must engage with these beliefs in greater depth. For example, the CLBS-1 instrument can measure pre-service teachers' beliefs in courses where critical literacy is

taught in pretest-posttest design to assess course effectiveness. Nevertheless, like most instruments, the CLBS-1 instrument should be used in triangulation with other data collection methods, such as interviews and other self-reporting and data collection tools.

I designed this instrument to move the scholarship on critical literacy from a qualitative into a quantitative context and account for systematized and standardized approaches to sampling in the field of literacy and teacher preparation. Multiple iterations of the CLBS-1 instrument are required to achieve an excellent model fit and standardize the CLBS-1 as a validated measure of pre-service teachers' critical literacy beliefs. Teacher educators and researchers can employ the CLBS-1 to survey pre-service teachers in the classroom and use the data to inform critical literacy pedagogy. This study contributes to the field of literacy education by exploring the application of survey instruments in pre-service teacher preparation.

Threats to Validity and Reliability and Limitations of the CLBS-1 Instrument

Regarding validity, selection and response bias were detected. Due to the purposive sampling procedure, pre-service teachers who were more responsive to critical literacy practices took the survey. As the COVID-19 pandemic encumbered the survey outreach, I began recruiting volunteers by sending out survey invitations to pre-service teachers at the University of Idaho. Subsequently, I sent the survey to teacher educators at other institutions across the United States through the LRA ListServ. In the consent form, I listed the project aims and defined critical literacy and its respective dimensions. Once participants gave consent, they either took the survey or closed out of it. Out of 405 participants, 89 left some questions unanswered that resulted in item non-response bias.

The survey administration relied on several assumptions. First, I assumed that pre-service teachers had some knowledge of critical literacy as it relates to teaching. Next, I expected that pre-service teachers responded honestly and accurately (Groves et al., 2009). Coupled with the social desirability bias, the practice of self-reporting affects the internal validity of the instrument (Johnson & Morgan, 2016). Pre-service teachers' responses were skewed, forming a right-tailed distribution. Because I asked teacher educators to disseminate the survey to their pre-service teachers, participant selection involved judgment sampling. As a non-random sampling method, judgment sampling is subject to bias because the researcher determines the sampling frame. In this study, the teacher educators influenced the sampling frame by selecting the survey participants (Johnson & Morgan, 2016). This sampling method can be a threat to external validity and requires scale testing with a random sample of pre-service teachers (Natesan et al., 2011).

One limitation of the CLBS-1 instrument is the population for which the findings can be generalized. The survey findings can only be generalized to the purposeful sample of pre-service teachers who took the survey. Next, a limitation is the acquiescence bias for those participants who selected a string of the same responses for all survey items. The social desirability bias is another limitation that influences participants to choose answers that favorably portray them. For example, pre-service teachers as novices may provide socially satisfactory responses by overrating their actions when responding to items about teaching expertise. As empowering teachers to act on the world is central to critical literacy (Freire, 1970), more surveying regarding the last dimension (taking action for social justice) of pre-service teachers is necessary.

Another limitation to this study is the inability to compare the CLBS-1 instrument to other published and peer-reviewed instruments measuring critical literacy. The lack of instruments in the field impedes testing for test-retest reliability of the CLBS-1 to other validated measures. Finally, the consequence of instrument use is also a limitation. This study documents the early stages of the instrument's development, which will continue to be improved internally, aligned with the modern understanding of psychometric theory and validity. Thus, I focused on the practical implications of the results to further inform critical literacy practice.

Future Research

More surveying with randomized samples of pre-service teachers is required to establish the CLBS-1 instrument's reliability in test-retest scenarios. Multiple iterations of piloting the CLBS-1 are necessary to deem this instrument a valid and reliable measure of critical literacy. As no peer-reviewed instruments on critical literacy are published, I plan to employ alternate form testing (AERA et al., 2014) to compare the modified instrument with 11 items to the original instrument and examine the correlation between data yielded from different survey administrations. Preferably, I will conduct the second survey administration in a post-pandemic setting, as this, understandably, presented a significant barrier during survey outreach and sampling.

By re-testing a modified CLBS-1 instrument, I intend to analyze the correlation between the scores obtained from the first and second administration for test-retest reliability to see if different versions produce similar results. In the revised version of the CLBS-1, I will also include a breakdown of elementary and secondary certification to parse out the sampled population and examine the role critical literacy plays in teacher education by focus. In

addition to the survey items for content and demographics, I included an optional question to see if participants would agree to a follow-up interview. Although this was not part of my dissertation, I envisioned this project as a pivotal start to my future research and would like to conduct a second research study, using this data to follow up with interested participants.

Implications

When the data are skewed to one side of the response scale, Devellis (2016) recommends rewording the items more strongly to represent the construct on a continuum. When items on the response scale have extreme means, it is hard to differentiate the data across the participants' attitudes, behaviors, and beliefs (Johnson & Morgan, 2016). While the CLBS-1 scale responses were not extremes, the data showed that participants agreed with many statements. On a 7-point Likert scale, the average number of scale points is 3.6 (51). Thus, the implication here is that the CLBS-1 items should be revised to "elicit more of a continuum of responses" (Johnson & Morgan, 2016, p. 123). When the response distribution is skewed, it is "difficult to evaluate the relationship with other variables because assumptions for statistical methods are not met" (Johnson & Morgan, 2016, p. 124). Johnson and Morgan (2016) suggested scale revision when participants are not using the full scale. Survey items with high standard deviation are preferred, indicating that participants utilized the entire response scale (Johnson & Morgan, 2016). The standard deviation across the CLBS-1 items showed that most participants had similar responses (*agree* = 6).

Conclusion

Recent Census Bureau projections indicate that students of color will make up over 56% of the U.S. school-going population by 2024 (Angel, 2018). According to several national surveys on this topic, the "exposure to the changing demographics evokes the

expression of greater explicit and implicit racial bias" that can trickle into school cultures (Craig & Richeson, 2014, p. 450). Harmful and racist rhetoric should be countered at all levels of teacher education, especially during the formative years of pre-service teacher development when they start shaping their professional teaching identities. Still, placing instructive value on cultural diversity benefits the U.S. education system. It is imperative to keep working with pre-service teachers to ensure their preparedness to pedagogically meet the ever-changing educational landscape of the United States (Sleeter, 2001). Besides, pre-service teachers should cultivate an awareness of the importance of perspectives, the idea of voice, and representation when reading books.

Ultimately, many of these pre-service teachers do not view themselves as actual educators yet, and one reason for this is their positionality in the teaching program. Many still view themselves primarily as students and lack the agency to undertake more responsibility toward becoming critical literacy educators. To become a critical literacy educator, pre-service teachers need to exercise their agency in a sociopolitical system (such as education) to serve all students. The participants in this study were predominately White monolingual females constituting 67% of the total number of participants who answered all the demographic questions (*n*=311).

To answer the research question, To what extent does the Critical Literacy Beliefs Survey (CLBS-1) represent the hypothesized dimensions of critical literacy found in the literature?, the CLBS-1 instrument does represent the hypothesized dimensions of critical literacy except for exploring multiple perspectives, which is a dimension embedded in the remaining three dimensions. The current findings can be discussed only in the context of the sampled population, as the CLBS-1 instrument needs to be refined and piloted with a different

sample to generalize the CLBS-1 to a random population. Additional surveying of pre-service

teachers as they navigate coursework and teaching practicums is required to further the

scholarship in larger-scale studies and with larger samples of participants.

REFERENCES

Abacioglu, C. S., Volman, M., & Fischer, A. H. (2020). Teachers' multicultural attitudes and perspective taking abilities as factors in culturally responsive teaching. *British Journal of Educational Psychology*, *90*(3), 736-752.

American Educational Research Association (AERA), American Psychological Association (APA), & National Council on Measurement in Education (NCME). (2014). *Standards for educational and psychological testing*. Washington, DC: American Psychological Association.

Angel, J. L. (Ed.). (2018). *The politics of a majority-minority nation: Aging, diversity, and immigration*. Springer Publishing Company.

Anthony-Stevens, V., & Langford, S. (2020). "What do you need a course like that for?" Conceptualizing diverse ruralities in rural teacher education. *Journal of Teacher Education*, *71*(3), 332-344.

Arnold, J. (2019). Artful praxis: experience, inquiry and consciousness. *Qualitative Research Journal*, *19*(4), 438-448.

Arnold, J., & Mundy, B. (2020). Praxis pedagogy in teacher education. *Smart Learning Environments*, *7*(1), 1-14.

Arnold, M. L., Newman, J. H., Gaddy, B. B., & Dean, C. B. (2005). A look at the condition of rural education research: Setting a direction for future research. *Journal of research in Rural Education*, *20*(6), 1-25.

Arsal, Z. (2019), Critical multicultural education and preservice teachers' multicultural attitudes. *Journal for Multicultural Education*, *13*(1), 106-118.

Assaf, L. C., & López, M. M. (2015). Generative learning in a service-learning project and field-base teacher education program: Learning to become culturally responsive teachers. *Literacy Research: Theory, Method, and Practice*, *64*(1), 323-338.

Bacharach, S. B. (1989). Organizational theories: Some criteria for evaluation. *Academy of management review*, *14*(4), 496-515.

Bacon, C. K. (2020). "It's not really my job": A mixed methods framework for language ideologies, monolingualism, and teaching emergent bilingual learners. *Journal of Teacher Education*, *71*(2), 172-187.

Baysal, Z. N. (2017). The problem-based learning process: Reflections of pre-service elementary school teachers. *Educational Research and Reviews*, *12*(4), 177-188.

Bazemore-Bertrand, S., & Handsfield, L. J. (2019). Show & tell: Elementary teacher candidates' perceptions of teaching in high-poverty schools. *Multicultural Education*, *26*(3/4), 27-37.

Beauchamp, C., & Thomas, L. (2009). Understanding teacher identity: An overview of issues in the literature and implications for teacher education. *Cambridge journal of education*, *39*(2), 175-189.

Berry, T., Burnett, R., Beschorner, B., Eastman, K., Krull, M., & Kruizenga, T. (2020). Racial experiences of pre-service teachers. *Teaching Education*, 1-15.

Biernacki, P., & Waldorf, D. (1981). Snowball sampling: Problems and techniques of chain referral sampling. *Sociological methods & research*, *10*(2), 141-163.

Bishop, E. (2014). Critical literacy: Bringing theory to praxis. *Journal of Curriculum Theorizing*, *30*(1).

Bishop, R. S. (1990). Walk tall in the world: African American literature for today's children. *The Journal of Negro Education*, *59*(4), 556-565.

Bodur, Y. (2016). Is cultural responsiveness part of effective teaching?: Preservice teacher perspectives. *Georgia Educational Researcher*, *13*(1), 113-133.

Bogdan, R. C., & Biklen, S. K. (1998). *Qualitative research for education: An introduction to theory and methods* (3rd ed.). Allyn & Bacon.

Boon, H. J., & Lewthwaite, B. (2015). Development of an instrument to measure a facet of quality teaching: Culturally responsive pedagogy. *International Journal of Educational Research*, *72*, 38-58.

Boozer, M. E., Maras, L B., Et Brummett, B. (1999). In C. Edelsky (Ed.), *Making justice our project: Teachers working toward critical whole language practice* (pp. 55-76). National Council of Teachers of English.

Botelho, M. J., & Rudman, M. K. (2009). *Critical multicultural analysis of children's literature: Mirrors, windows, and doors*. Routledge.

Boyd, A.S. and Darragh, J.J. (2019), Critical literacies on the university campus: Engaging pre-service teachers with social action projects, *English Teaching: Practice & Critique*, *19*(1), 49-63.

Brooks, W. (2009). An author as a counter-storyteller: Applying critical race theory to a Coretta Scott King Award book. *Children's Literature in Education*, *40*(1), 33-45.

Brown, K. M. (2004). Assessing preservice leaders' perceptions, attitudes, and values regarding issues of diversity, social justice, and equity: A review of existing measures. *Equity & Excellence in Education*, *37*(4), 332-342.

Brown, T. A. (2014). *Confirmatory factor analysis for applied research* (2nd ed.). Guilford Press.

Brown, T. A., & Moore, M. T. (2015). Confirmatory factor analysis. In R. H. Hoyle (Ed.), *Handbook of structural equation modeling* (pp. 361-379). Guilford Press.

Burton, M., Brown, K., & Johnson, A. (2013). Storylines about rural teachers in the United States: A narrative analysis of the literature. *Journal of Research in Rural Education*, *28*(12).

Campano, G., Ghiso, M. P., LeBlanc, R., & Sánchez, L. (2016). "American hunger": Challenging epistemic injustice through collaborative teacher inquiry. In *Teacher education for high poverty schools* (pp. 33-52). Springer, Cham.

Cancino, M., Durán, M., & Solorza, C. (2020). What learning can do to teaching: Assessing the impact of apprenticeship of observation on pre-service teachers' beliefs. *English Teaching & Learning*, *44*(3), 297-312.

Cheng, K. H. (2017). Reading an augmented reality book: An exploration of learners' cognitive load, motivation, and attitudes. *Australasian Journal of Educational Technology*, *33*(4).

Cho, H. (2015). "I love this approach, but find it difficult to jump in with two feet!" Teachers' perceived challenges of employing critical literacy. *English Language Teaching*, *8*(6), 69–79.

Cho, J., Rios, F., Trent, A., & Mayfield, K. K. (2012). Integrating language diversity into teacher education curricula in a rural context: candidates' developmental perspectives and understandings. *Teacher Education Quarterly*, *39*(2), 63-85.

Civitillo, S., Juang, L. P., & Schachner, M. K. (2018). Challenging beliefs about cultural

  diversity in education: A synthesis and critical review of trainings with pre-service

  teachers. *Educational Research Review*, *24*, 67-83.

Colman, A. M., Norris, C. E., & Preston, C. C. (1997). Comparing rating scales of different

  lengths: Equivalence of scores from 5-point and 7-point scales. *Psychological

  Reports*, *80*(2), 355-362.

Colson, T., Sparks, K., Berridge, G., Frimming, R., & Willis, C. (2017). Pre-service teachers

  and self-efficacy: A study in contrast. *Discourse and Communication for Sustainable

  Education*, *8*(2), 66-76.

Colton, D., & Covert, R. W. (2007). *Designing and constructing instruments for social

  research and evaluation*. John Wiley & Sons.

Comfrey, A. L., & Lee, H. B. (1992). *A first course in factor analysis*. Lawrence Erlbaum

  Associates.

Cooperative Children's Book Center. (2019). *Publishing statistics about people of color and

  First/ Native Nations and by people of color and First/Native Nations authors and

  illustrators*. Multicultural Literature. https://ccbc.education.wisc.edu/literature-

  resources/ccbc-diversity-statistics /books-by-about-poc-fnn/

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and

  applications. *Journal of applied psychology*, *78*(1), 98.

Craig, M. A., & Richeson, J. A. (2014). On the precipice of a "majority-minority" America:

  Perceived status threat from the racial demographic shift affects White Americans'

  political ideology. *Psychological science*, *25*(6), 1189-1197.

Crawford-Garrett, K., Carbajal, D. R., Short, A., Simpson, K., Meyer, E., & Deck-Stevens, E. (2020). Teaching out loud: Critical literacy, intergenerational professional development, and educational transformation in a teacher inquiry community. *The New Educator*, 1-17.

Crede, M. and Harms, P. (2019), Questionable research practices when using confirmatory factor analysis. *Journal of Managerial Psychology*, *34*(1), 18-30.

Crocker, L., & Algina, J. (1986). *Classical and modern test theory*. Holt, Rinehart & Winston.

Crowley, R. (2019a). White teachers, racial privilege, and the sociological imagination. *Urban Education*, *54*(10), 1462-1488.

Crowley, R. M. (2019b). "It meant you were in trouble:" White teachers, race, and White shame. *Whiteness and Education*, *4*(2), 180-198.

Daniel, S. M. (2016). Grappling with culturally responsive pedagogy: A study of elementary-level teacher candidates' learning across practicum and diversity coursework experiences. *The Urban Review*, *48*(4), 579-600.

Darling-Hammond, L. (2006). Constructing 21st-century teacher education. *Journal of teacher education*, *57*(3), 300-314.

Darling-Hammond, L., Holtzman, D. J., Gatlin, S. J., & Heilig, J. V. (2005). Does teacher preparation matter? Evidence about teacher certification, Teach for America, and teacher effectiveness. *Education Policy Analysis Archives/Archivos Analíticos de Políticas Educativas*, *13*, 1-48.

Dawes, J. (2008). Do data characteristics change according to the number of scale points used? An experiment using 5-point, 7-point and 10-point scales. *International journal of market research*, *50*(1), 61-104.

Desimone, L. M., & Le Floch, K. C. (2004). Are we asking the right questions? Using cognitive interviews to improve surveys in education research. *Educational evaluation and policy analysis*, *26*(1), 1-22.

DeVellis, R. F. (2016). *Scale development: Theory and applications* (Vol. 26). Sage publications.

Edwards-Groves, C., & Gray, D. (2008). Developing praxis and reflective practice in pre-service teacher education: Affordances and constraints reported by prospective teachers. In *Enabling praxis* (pp. 85-107). Brill Sense.

Ellerbrock, C. R., Cruz, B. C., Vásquez, A., & Howes, E. V. (2016). Preparing culturally responsive teachers: Effective practices in teacher education. *Action in Teacher Education*, *38*(3), 226-239.

Enright, E., Coll, L., Ní Chróinín, D., & Fitzpatrick, M. (2017). Student voice as risky praxis: Democratising physical education teacher education. *Physical education and sport pedagogy*, *22*(5), 459-472.

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, *5*(1), 1-4.

Everitt, B. (1975). Multivariate analysis: The need for data, and other problems. *British Journal of Psychiatry*, *126*, 237-240.

Fairclough, N. (1989). *Language and power*. Longman.

Farrell, L (1998, November). Reconstructing Sally: Narratives and counter narratives around work, education and workplace restructure. Paper presented at the annual meeting of the Australian Association for Research in Education, Adelaide.

Fink, A., & Litwin, M. S. (1995). *How to measure survey reliability and validity* (Vol. 7). Sage.

Finstad, K. (2010). Response interpolation and scale sensitivity: Evidence against 5-point scales. *Journal of Usability Studies*, *5*(3), 104-110.

Fraser, B. J. (1986). *Classroom environment*. Croom Helm, Ltd.

Freeman, D. (2002). The hidden side of the work: Teacher knowledge and learning to teach. A perspective from North American educational research on teacher education in English language teaching. *Language teaching*, *35*(1), 1-13.

Freeman, Y. S., & Freeman, D. E. (Eds.). (2014). *Research on preparing preservice teachers to work effectively with emergent bilinguals*. Emerald Group Publishing.

Freire, P. (1970). *Pedagogy of the oppressed*. Continuum International.

García, E., Arias, M. B., Harris Murri, N. J., & Serna, C. (2010). Developing responsive teachers: A challenge for a demographic reality. *Journal of Teacher Education*, *61*(1-2), 132-142.

Garmon, M. A. (2005). Six key factors for changing preservice teachers' attitudes/beliefs about diversity. *Educational Studies*, *38*(3), 275-286.

Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of teacher education*, *53*(2), 106-116.

Gee, J. P. (1990). *Social linguistics and literacies: Ideology in discourses*. Falmer.

Gee, J. P. (2010). A situated-sociocultural approach to literacy and technology. *The new literacies: Multiple perspectives on research and practice*, 165-193.

Ghiso, M. P., Spencer, T., Ngo, L., & Campano, G. (2013). Critical inquiry into literacy

    teacher education: Accounting for students. In *literacy teacher educators* (pp. 49-64).

    Brill Sense.

Gill, D. (2000). A national survey of the use of multicultural young adult literature in

    university courses. *The ALAN Review*, *27*(2), 48-50.

Giroux, H. (1993). Literacy and the politics of difference. In C. Lankshear Et P. L McLaren

    (Eds.), *Critical literacy: Politics, praxis, and the postmodern* (pp. 367-378). State

    University of New York Press.

Giroux, H. A. (1988). *Teachers as intellectuals: toward a critical pedagogy of learning*.

    Bergin & Garvey.

Giselsson, K. (2020). Critical thinking and critical literacy: Mutually exclusive?. *International*

    Journal for the Scholarship of Teaching and Learning, *14*(1), 5.

González, N., Moll, L. C., & Amanti, C. (Eds.). (2006). *Funds of knowledge: Theorizing*

    practices in households, communities, and classrooms. Routledge.

Goulah, J., & Soltero, S.W. (2015). Reshaping the mainstream education climate through

    bilingual– bicultural education. In Freeman, Y., & D. Freeman (Eds.), *Research on*

    preparing in-service teachers to work effectively with emergent bilinguals (pp. 177–

    203). Emerald Group.

Gray, P. L. (2020). Mitigating the apprenticeship of observation. *Teaching Education*, *31*(4),

    404-423.

Greene, M. (1998). Introduction—Teaching for social justice. In W. Ayers, J. A. Hunt, & T.

    Quinn (Eds.), *Teaching for social justice: A democracy and education reader* (pp.

    xxvii-xlvi). Teachers College Press.

Groves, R. M., Fowler, F. J. J., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2009). *Survey methodology* (2nd ed.). Wiley-Interscience.

Guerrettaz, A. M., Zahler, T., Sotirovska, V., & Boyd, A. S. (2020). 'We acted like ELLs': A pedagogy of embodiment in preservice teacher education. *Language Teaching Research*, 1362168820909980.

Gustine, G. G. (2018). A survey on critical literacy as a pedagogical approach to teaching English in Indonesia. *Indonesian Journal of Applied Linguistics*, *7*(3), 531-537.

Guttmann, J., & Bar-Tal, D. (1982). Stereotypic perceptions of teachers. *American Educational Research Journal*, *19*(4), 519-528.

Han, S., Blank, J., & Berson, I. R. (2017). To transform or to reproduce: Critical examination of teacher inquiry within early childhood teacher preparation. *Journal of Early Childhood Teacher Education*, *38*(4), 308-325.

Han, S., Blank, J., & Berson, I. R. (2020). Revisiting reflective practice in an era of teacher education reform: A self-study of an early childhood teacher education program. *Journal of Early Childhood Teacher Education*, *41*(2), 162-182.

Harste J. C., Breau, A., Leland, C., Lewison, M., Ociepka, A., 6t Vasquez, V. (2000). Supporting critical conversations. In K. M. Pierce (Ed.), *Adventuring with books* (pp. 506-554). National Council of Teachers of English.

Hawk, P. P., & Schmidt, M. W. (1989). Teacher preparation: A comparison of traditional and alternative programs. *Journal of Teacher Education*, *40*(5), 53-58.

Hendrix-Soto, A., & Mosley Wetzel, M. (2019). A review of critical literacies in preservice teacher education: pedagogies, shifts, and barriers. *Teaching Education*, *30*(2), 200-216.

Henry, G. (1986). *Cultural diversity awareness inventory*. Hampton University Press.

Hinkin, T. R. (1998). A brief tutorial on the development of measures for use in survey questionnaires. *Organizational Research Methods*, *1*(1), 104-121.

Hipple, T., Comer, M., & Boren, D. (1997). Twenty recent novels (and more) about adolescents for bibliotherapy. *Professional School Counseling*, *1*(1), 65-67.

Hoelter, J. W. (1983). The analysis of covariance structures: Goodness-of-fit indices. *Sociological Methods and Research, 11,* 325-344.

Hopkins, K. D. (1998). *Educational and psychological measurement and evaluation*. Allyn & Bacon.

Howard, G. R. (2016). *We can't teach what we don't know: White teachers, multiracial schools*. Teachers College Press.

Howrey, S. T., & Whelan-Kim, K. (2009). Building cultural responsiveness in rural, preservice teachers using a multicultural children's literature project. *Journal of Early Childhood Teacher Education*, *30*(2), 123-137.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, *6*(1), 1-55.

Iwai, Y. (2017). Multicultural children's literature and teacher candidates' awareness and attitudes toward cultural diversity. *International Electronic Journal of Elementary Education*, *5*(2), 185-198.

Janks, H. (2000). Domination, access, diversity, and design: A synthesis for critical literacy education. *Educational Review*, *52*(2), 15-30.

Janks, H. (2017). Critical literacy and the social justice project of education. *English*

    Teaching: Practice & Critique, *16*(2), 132-144.

Johnson, K. E. (2006). The sociocultural turn and its challenges for second language teacher

    education. *Tesol Quarterly*, *40*(1), 235-257.

Johnson, R. L., & Morgan, G. B. (2016). *Survey scales: A guide to development, analysis, and*

    reporting. Guilford Publications.

Jones, J., & Walker, S. L. (2016). The development of the multicultural awareness, skills, and

    knowledge survey: An instrument for assessing the cultural competency of pre-service

    teachers. *Diversity, Social Justice, and the Educational Leader*, *1*(2), 5.

Jun, E. J. (2016). Multicultural education course put into practice. *Multicultural Education*

    Review, *8*(2), 83-98.

Karacabey, M. F., Ozdere, M., & Bozkus, K. (2019). The attitudes of teachers towards

    multicultural education. *European Journal of Educational Research*, *8*(1), 383-393.

Kunesh, C. E., & Noltemeyer, A. (2019). Understanding disciplinary disproportionality:

    Stereotypes shape pre-service teachers' beliefs about black boys' behavior. *Urban*

    Education, *54*(4), 471-498.

Kunnath, J. P., & Jackson, A. (2019). Developing student critical consciousness: Twitter as a

    tool to apply critical literacy in the English classroom. *Journal of Media Literacy*

    Education, *11*(1), 52-74.

Kwong, K. (2020). Teaching microaggressions, identity, and social justice: A reflective,

    experiential and collaborative pedagogical approach. *International Journal of Higher*

    Education, *9*(4), 184-198.

Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American educational research journal*, *32*(3), 465-491.

Lankshear, C., Et McLaren, P. L (1993). Preface. In C. Lankshear Et P. L McLaren (Eds.), *Critical literacy: Politics, praxis, and the postmodern* (pp. ix-xx). State University of New York Press.

Lantolf, J.P. (Ed.). (2000). *Sociocultural theory and second language learning*. Oxford University Press.

Larke, P. J. (1990). Cultural diversity awareness inventory: Assessing the sensitivity of preservice teachers. *Action in Teacher Education*, *12*(3), 23-30.

Leath, S., Mathews, C., Harrison, A., & Chavous, T. (2019). Racial identity, racial discrimination, and classroom engagement outcomes among Black girls and boys in predominantly Black and predominantly White school districts. *American Educational Research Journal*, *56*(4), 1318-1352.

Lee, C. J. (2011). Myths about critical literacy: What teachers need to unlearn. *Journal of Language and literacy education*, *7*(1), 95-102.

Levis, J., & Farrell, T. (2007). Failing the practicum: Narrowing the gap between expectations and reality with reflective practice. *Tesol Quarterly*, *41*(1), 193-201.

Lewis Chiu, C., Sayman, D., Carrero, K. M., Gibbon, T., Zolkoski, S. M., & Lusk, M. E. (2017). Developing culturally competent preservice teachers. *Multicultural Perspectives*, *19*(1), 47-52.

Lewison, M., Flint, A. S., & Van Sluys, K. (2002). Taking on critical literacy: The journey of newcomers and novices. *Language arts*, *79*(5), 382-392.

Lewison, M., Leland, C., & Harste, C. J. (2015). *Creating critical classrooms: reading and writing with an edge* (Second edition.). Routledge.

Lewison, M., Leland, C., Et Harste, J. (2000). Not in my classroom! The case for using multiview social issues books with children. *Australian Journal of Language and Literacy*, *23*(1), 8-20.

Lopez, A. E. (2011). Culturally relevant pedagogy and critical literacy in diverse English classrooms: A case study of a secondary English teacher's activism and agency. *English Teaching: Practice and Critique*, *10*(4), 75-93.

Lortie, D. C. (1975). *Schoolteacher: A sociological study*. University of Chicago Press.

Luke, A. (2000). Critical literacy in Australia: A matter of context and standpoint. *Journal of adolescent & adult literacy*, *43*(5), 448-461.

Luke, A. (2018). *Critical literacy, schooling, and social justice: the selected works of Allan Luke*. Routledge, Taylor & Francis Group.

Luke, A., Freebody, P. (1997). The social practices of reading. In Muspratt, S., Luke, A., Freebody, P. (Eds.), *Constructing critical literacies: Teaching and learning textual practice* (pp. 188-226). Hampton Press.

Lykes, M. B., Lloyd, C. R., & Nicholson, K. M. (2018). Participatory and action research within and beyond the academy: Contesting racism through decolonial praxis and teaching "against the grain". *American journal of community psychology*, *62*(3-4), 406-418.

Mann, S. J. (2005). The language teacher's development. *Language teaching*, *38*(3), 103-118.

Marsh, H. W., Muthén, B., Asparouhov, T., Lüdtke, O., Robitzsch, A., Morin, A. J., & Trautwein, U. (2009). Exploratory structural equation modeling, integrating CFA and

EFA: Application to students' evaluations of university teaching. *Structural equation modeling: A multidisciplinary journal*, *16*(3), 439-476.

Marsh, J. (2000). Teletubby tales: Popular culture in the early years language and literacy curriculum. *Contemporary Issues in Early Childhood*, *1*(2), 119-123.

Mathieu, J. E., Luciano, M. M., D'Innocenzo, L., Klock, E. A., & LePine, J. A. (2020). The development and construct validity of a team processes survey measure. *Organizational Research Methods*, *23*(3), 399-431.

McAllister, G., & Irvine, J. J. (2002). The role of empathy in teaching culturally diverse students: A qualitative study of teachers' beliefs. *Journal of Teacher Education*, *53*(5), 433-443.

McDermott, M. (2002). Collaging pre-service teacher identity. *Teacher Education Quarterly*, *29*(4), 53-68.

McLaughlin, M., & DeVoogd, G. (2020). Critical expressionism: Expanding reader response in critical literacy. *The Reading Teacher*, *73*(5), 587–595.

Miller, E. T. (2017). Multiple pathways to whiteness: White teachers' unsteady racial identities. *Early Years*, *37*(1), 17-33.

Milner, H. R., & Laughter, J. C. (2015). But good intentions are not enough: Preparing teachers to center race and poverty. *Urban Review*, *47*, 341-363.

Milner, H. R., Flowers, L. A., Moore, E., Moore, J. L., & Flowers, T. A. (2003). Preservice teachers' awareness of multiculturalism and diversity. *The High School Journal*, *87*(1), 63-70.

Morrell, E. (2015). *Critical literacy and urban youth: Pedagogies of access, dissent, and liberation*. Routledge.

Muthén, L. K., & Muthén, B. (2019). Mplus. *The comprehensive modelling program for applied researchers: user's guide*, *5*.

Naidoo, L., & Wagner, S. (2020). Thriving, not just surviving: The impact of teacher mentors on pre-service teachers in disadvantaged school contexts. *Teaching and Teacher Education*, *96*, 103185.

Natesan, P., Webb-Hasan, G. C., Carter, N. P., & Walter, P. (2011). Validity of the cultural awareness and perceptions inventory of urban teachers: A parallel mixed methods study. *International Journal of Multiple Research Approaches*, *5*(2), 238-253.

National Council on Teacher Quality. (2020). *Teacher prep review: Program performance in early reading instruction*. https://www.nctq.org/review

Nayak, A., & Biswal, R. (2020). *Poverty: By chance or by choice: "The hidden forces that shape the poor and the poverty"*. Notion Press.

Ng, C. H. (2017). Pre-service teachers teaching critical literacy through microteaching: Possibilities and constraints. *Changing English*, *24*(1), 81-90.

Nganga, L. (2020). Analyzing children's literature for hidden bias helps preservice teachers gain pedagogical practices in critical multicultural education. *Journal of Research in Childhood Education*, *34*(1), 93-107.

Nieto, S. (1999). *The light in their eyes, creating multicultural learning communities*. Teachers College Press.

Norris, K., Lucas, L., & Prudhoe, C. (2012). Examining critical literacy: Preparing preservice teachers to use critical literacy in the early childhood classroom. *Multicultural Education*, *19*(2), 59-62.

Nunnally, J. (1978). *Psychometric theory* (2nd Ed.). McGraw-Hill.

Paciotto, C., & Delany-Barmann, G. (2011). Planning micro-level language education reform in new diaspora sites: Two-way immersion education in the rural Midwest. *Language Policy*, *10*(3), 221.

Pearson, R. H., & Mundform, D. J. (2010). Recommended sample size for conducting exploratory factor analysis on dichotomous data. *Journal of Modern Applied Statistical Methods*, *9*(2), 5.

Peres, E. (2019). The importance of story time for Brazilian preservice teachers. *The Reading Teacher*, *73*(1), 95-98.

Peterson-Ahmad, M. B., Hovey, K. A., & Peak, P. K. (2018). Pre-service teacher perceptions and knowledge regarding professional development: Implications for teacher preparation programs. *Journal of Special Education Apprenticeship*, *7*(2), n2.

Philip, T. M., Souto-Manning, M., Anderson, L., Horn, I., J. Carter Andrews, D., Stillman, J., & Varghese, M. (2019). Making justice peripheral by constructing practice as "core": How the increasing prominence of core practices challenges teacher education. *Journal of Teacher Education*, *70*(3), 251-264.

Pinter, H. H., Bloom, L. A., Rush, C. B., & Sastre, C. (2020). Best practices in teacher preparation for inclusive education. In *Handbook of research on innovative pedagogies and best practices in teacher education* (pp. 52-68). IGI Global.

Piwowar, V., Barth, V. L., Ophardt, D., & Thiel, F. (2018). Evidence-based scripted videos on handling student misbehavior: The development and evaluation of video cases for teacher education. *Professional development in education*, *44*(3), 369-384.

Poulus, D., & Exley, B. (2018). Critical literacy for culturally diverse teenagers: "I've learned something that is actually useful." *Journal of Adolescent & Adult Literacy*, *62*(3), 271–280.

Ratcliffe, M., Burd, C., Holder, K., & Fields, A. (2016). Defining rural at the US Census Bureau. *American community survey and geography brief*, *1*, 8.

Reeves, J. (2018). Teacher identity work in neoliberal schooling spaces. *Teaching and Teacher Education*, *72*, 98-106.

Rhodes, C. M. (2017). A validation study of the Culturally Responsive Teaching Survey. *Universal Journal of Educational Research*, *5*(1), 45-53.

Samuels, A. J., Samuels, G. L., & Cook, T. M. (2017). Examining perceptions of culturally responsive pedagogy in teacher preparation and teacher leadership candidates. *SRATE Journal*, *26*(2), 50-60.

Santamaría Graff, C., Manlove, J., Stuckey, S., & Foley, M. (2020). Examining pre-service special education teachers' biases and evolving understandings about families through a family as faculty approach. *Preventing School Failure: Alternative Education for Children and Youth*, 1-18.

Schiera, A. J. (2019). Justice, practice and the 'real world': Pre-service teachers' critically conscious visions for teaching amid the complexities and challenges of learning to teach. *International Journal of Qualitative Studies in Education*, *32*(7), 929-946.

Schwartz, T., Dinnen, H., Smith-Millman, M. K., Dixon, M., & Flaspohler, P. D. (2017). The urban teaching cohort: pre-service training to support mental health in urban schools. *Advances in School Mental Health Promotion*, *10*(1), 26-48.

Shannon, P. (1995). *Text, lies and videotape: Stories about life, literacy and learning*. Heinemann.

Shefer, T., Hearn, J., Ratele, K., & Boonzaier, F. (Eds.). (2018). *Engaging youth in activism, research and pedagogical praxis: Transnational and intersectional perspectives on gender, sex, and race*. Routledge.

Sherfinski, M., Hayes, S., Zhang, J., & Jalalifard, M. (2020). Grappling with funds of knowledge in rural Appalachia and beyond: Shifting contexts of pre-service teachers. *Action in Teacher Education*, 1-22.

Shor, I. (1987). Educating the educators: A Freirean approach to the crisis in teacher education. In I. Shore (Ed.), *Freire for the classroom: A sourcebook for liberatory teaching* (pp. 7-32). Boynton/Cook.

Sinclair, M. N., & Powell, J. S. (2020). Becoming allies accomplices: Problematizing the intersection of reflection and action through pre-service teachers' autoethnographies as praxis. *The International Journal of Critical Pedagogy*, *11*(1).

Sireci, S. G. (2016). On the validity of useless tests. *Assessment in Education: Principles, Policy & Practice*, *23*(2), 226-235.

Smagorinsky, P., & Barnes, M. E. (2014). Revisiting and revising the apprenticeship of observation. *Teacher Education Quarterly*, *41*(4), 29-52.

Sotirovska, V. & Elhess, M. Negotiating intersectional identities through visioning. (In press). *Peabody Journal of Education.*

Sotirovska, V., & Kelley, J. (2020). Anthropomorphic characters in children's literature: Windows, mirrors, or sliding glass doors to embodied immigrant experiences. *The elementary school journal*, *121*(2), 337-355.

Souto-Manning, M. (2017). Generative text sets: Tools for negotiating critically inclusive early childhood teacher education pedagogical practices. *Journal of early childhood teacher education*, *38*(1), 79-101.

Souto-Manning, M. (2019). Toward praxically-just transformations: interrupting racism in teacher education. *Journal of education for teaching*, *45*(1), 97-113.

Spanierman, L. B., Oh, E., Heppner, P. P., Neville, H. A., Mobley, M., Wright, C. V., ... & Navarro, R. (2011). The multicultural teaching competency scale: Development and initial validation. *Urban Education*, *46*(3), 440-464.

Spezzini, S., Austin, J. S., & Prado, J. (2015). Why didn't anyone tell me this before?. In *Research on preparing inservice teachers to work effectively with emergent bilinguals*. Emerald Group Publishing Limited.

Stallworth, B. J., Gibbons, L., & Fauber, L. (2006). It's not on the list: An exploration of teachers' perspectives on using multicultural literature. *Journal of adolescent & adult literacy*, *49*(6), 478-489.

Sullivan, A. (2020). Sex and the census: why surveys should not conflate sex and gender identity. *International Journal of Social Research Methodology*, 1-8.

Sullivan, G. M., & Artino Jr, A. R. (2013). Analyzing and interpreting data from Likert-type scales. *Journal of graduate medical education*, *5*(4), 541-542.

Tabachnick, B. G. & Fidell, L. S. (2007). *Using multivariate statistics*. Allyn & Bacon/Pearson Education.

Takaki, R. (1993). *A different mirror: A history of multicultural America*. Little, Brown and Company.

Taylor, E. (1998). A primer on critical race theory: who are the critical race theorists and what are they saying?. *The journal of blacks in higher education*, *19*, 122.

Tican, C., & Deniz, S. (2019). Pre-service teachers' opinions about the use of 21st century learner and 21st century teacher skills. *European Journal of Educational Research*, *8*(1), 181-197.

Tinkler, B., & Tinkler, A. (2013). Experiencing the other: The impact of service-learning on preservice teachers' perceptions of diversity. *Teacher Education Quarterly*, *40*(4), 41-62.

Tran, M. T., Young, R. L., & Di Lella, J. D. (1994). Multicultural education courses and the student teacher: Eliminating stereotypical attitudes in our ethnically diverse classroom. *Journal of Teacher Education*, *45*(3), 183-189.

U.S. Department of Education. (2016). *The state of racial diversity in the educator workforce*. Washington, DC: U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service.

Umutlu, D., & Kim, C. (2020). Design guidelines for scaffolding pre☐service teachers' reflection☐in☐action toward culturally responsive teaching. *Reflective Practice*, *21*(5), 587-603.

Utt, J., & Tochluk, S. (2020). White teacher, know thyself: Improving anti-racist praxis through racial identity development. *Urban Education*, *55*(1), 125-152.

Vasquez, V. (2000). Our way: Using the everyday to create a critical literacy curriculum. *Primary Voices*, *9*(2), 8-13.

Vasquez, V. M., Janks, H., & Comber, B. (2019). Critical literacy as a way of being and doing. *Language Arts*, *96*(5), 300-311.

Vasquez, V. M., Tate, S. L., & Harste, J. C. (2013). *Negotiating critical literacies with teachers: Theoretical foundations and pedagogical resources for pre-service and in-service contexts*. Routledge.

Vaughan, W. E. (2019). Preparing culturally responsive educators in the 21st century: White Pre-Service teachers identification of unearned privileges. *Georgia Educational Researcher*, *16*(2), n2.

Vaughn, M., & Faircloth, B. (2011). Understanding teacher visioning and agency during literacy instruction. *60th yearbook of the Literacy Research Association*, 309-323.

Vaughn, M., & Kuby, C. R. (2019). Fostering critical, relational visionaries: Autoethnographic practices in teacher preparation. *Action in Teacher Education*, *41*(2), 117-136.

Vaughn, M., & Saul, M. (2013). Navigating the rural terrain: Educators' visions to promote change. *The Rural Educator*, *34*(2).

Vaughn, M., Jang, B. G., Sotirovska, V., & Cooper-Novack, G. (2020). Student agency in Literacy: A systematic review of the literature. *Reading Psychology*, *41*(7), 712-734.

Vaughn, M., Parsons, S. A., Kologi, S., & Saul, M. (2014). Action research as a reflective tool: A multiple case study of eight rural educators' understandings of instructional practice. *Reflective Practice*, *15*(5), 634-650.

Vaughn, M., Premo, J., Sotirovska, V. V., & Erickson, D. (2020). Evaluating agency in literacy using the student agency profile. *The Reading Teacher*, *73*(4), 427-441.

Vaughn, M., Sotirovska, V., Darragh, J. J., & Elhess, M. (2021). Examining agency in children's nonfiction picture books. *Children's Literature in Education*, 1-19.

Villenas, S. A. (2019). The anthropology of education and contributions to critical race studies. *Equity & Excellence in Education*, *52*(1), 68-74.

Vittrup, B. (2016). Early childhood teachers' approaches to multicultural education & perceived barriers to disseminating anti-bias messages. *Multicultural Education*, *23*, 37-41.

Vogt, D. S., King, D. W., & King, L. A. (2004). Focus groups in psychological assessment: Enhancing content validity by consulting members of the target population. *Psychological Assessment*, *16*(3), 231-243.

Warren, C. A. (2018). Empathy, teacher dispositions, and preparation for culturally responsive pedagogy. *Journal of Teacher Education*, *69*(2), 169-183.

Weber, S. (2017). The impact of service learning on pre-service teachers preconceptions of urban education. *Journal of Inquiry and Action in Education*, *8*(2), 2.

Welsh, K. A., & Schaffer, C. (2017). Developing the effective teaching skills of teacher candidates during field experiences. *Educational Forum*, *81*, 301-321.

Weuffen, S., Cahir, F., Barnes, A., & Powell, B. (2019). Uncovering hidden histories: Evaluating preservice teachers'(PST) understanding of local indigenous perspectives in history via digital storytelling at Australia's Sovereign Hill. *Diaspora, Indigenous, and Minority Education*, *13*(3), 165-181.

White, R. E., & Cooper, K. (2015). What is critical literacy?. In *democracy and its discontents* (pp. 21-35). Brill Sense.

Wienclaw, R. A. (2009). Surveys in sociology research. *Research Starters Sociology*, *1*(1), 1-5.

Willis, G. B. (2005). Cognitive interviewing: A tool for improving questionnaire design.

Sage.

Xu, Y., & Brown, G. T. (2016). Teacher assessment literacy in practice: A

reconceptualization. *Teaching and Teacher Education*, *58*, 149-162.

APPENDICES

Appendix A

Critical Literacy Project Invitation for Expert

Dear professor [insert professor's name],

I hope you are doing well.

I am reaching out to you regarding my dissertation. I am developing a critical literacy survey for pre-service teachers, and I was wondering if you could take part in the panel of experts where you would review the survey items and match them to the four critical literacy dimensions developed by Lewison and colleagues (2002).

I am sharing the google form with the items for your convenience.

https://docs.google.com/forms/d/e/1FAIpQLSeC0tehQPxQTlMnEPNNhELtCZvG6omEuKf
N3yUz8TD6-Doq8Q/viewform?usp=sf_link

Pre-service Teachers' Perceptions of Critical Literacy Survey

Please match the items to the following dimensions as you best see fit. Focusing on the Sociopolitical. This dimension entails questioning unequal power relationships within social structures. Interrogating Multiple Points of View. This dimension focuses on developing empathy and being able to examine texts from different perspectives. Disrupting the Commonplace. This dimension entails a deeper examination of texts through a cultural, political, and intertextual lens in order to question master narratives. Taking Action for Social Justice. This dimension entails taking action for social justice towards equity and equality.

docs.google.com

I look forward to your reply.

Appendix B

Recruitment Letter for Teacher Educators

Dear professor [name of professor],

I hope this email finds you well. I am writing to you because of your expertise in [state the expertise of professor] as it relates to pre-service teacher education. My name is Vera Sotirovska, and I am a graduate student at the University of Idaho, conducting research in literacy education. I am reaching out to you regarding my dissertation project entitled, Developing a Pre-service Teachers' Critical Literacy Beliefs Instrument and kindly invite you to share the survey (if possible) with your pre-service teachers. My goal is to reach a diverse sample of pre-service teachers across the United States.
Below is the recruitment letter that you can share with your pre-service teachers as well as a link to the survey.

I apologize for the inconvenience, and I appreciate your help and support.

Dear pre-service teacher,

As part of the Curriculum and Instruction department at the University of Idaho, I have designed a survey for my dissertation to help me learn about your experiences with critical literacy as pre-service teachers and students majoring in education. The purpose of my research study is to gain a better understanding of your perceptions of critical literacy as it relates to social justice education, and I need your help! The survey takes between 4-6 min to complete, and it is anonymous.

Follow this link to the
Survey: https://uidaho.co1.qualtrics.com/jfe/form/SV_9QtLErjmNzMVb6Z
Or copy and paste the URL below into your internet
browser: https://uidaho.co1.qualtrics.com/jfe/form/SV_9QtLErjmNzMVb6Z

Sincerely,
Vera Sotirovska, M.A., Ed.M.
vsotirovska@uidaho.edu
University of Idaho

Appendix C

Recruitment Letter for Pre-service Teachers

Dear pre-service teacher,

As part of the Curriculum and Instruction department at the University of Idaho, I have designed a survey for my dissertation to learn about your experiences with critical literacy as pre-service teachers and students majoring in education. The purpose of my research study is to gain a better understanding of your perceptions of critical literacy as it relates to social justice education, and I hope you can help me.
The survey takes between 4-6 min to complete, and it is anonymous.

Follow this link to the
Survey: https://uidaho.co1.qualtrics.com/jfe/form/SV_9QtLErjmNzMVb6Z
Or copy and paste the URL below into your internet
browser: https://uidaho.co1.qualtrics.com/jfe/form/SV_9QtLErjmNzMVb6Z

Sincerely,
Vera Sotirovska, M.A., Ed.M.
vsotirovska@uidaho.edu
University of Idaho

Appendix D

Cognitive Interview Recruitment Email

Dear pre-service teacher,

I hope you are doing well during these challenging times.

I am reaching out about the study on critical literacy in which you participated and to share with you a survey I created.

Attached is the list of survey items I would like your opinion on regarding **the clarity and suitability of the items for pre-service teachers.**

If you have a bit of time, I would appreciate it if you could look at the items and share your opinion on them from your perspective as a pre-service teacher.

You can share your opinion over Zoom or however feels most comfortable to you. You can annotate the document with comments and highlights regarding readability, clarity, and suitability.

I really appreciate your involvement in the project, and I hope you are doing well and staying healthy.

Thank you,

Vera

Appendix E

Cognitive Interview Protocol

Thank you for reviewing the survey and for your participation in this interview. The purpose of this interview is to make sure that the survey items are clear, comprehensible, and appropriate. Your response will be confidentially recorded over the Zoom platform. If you wish to discontinue the interview at any point, please let me know. Do you have any questions before we begin?

Tell me about what critical literacy means to you in your own words?

Did you find any of the items hard to understand? If yes, which one(s)?

How would you change any of the items to make them clearer?

Is there any item that you find not appropriate? If yes, which one(s)?

Are there any words or phrases in the items that you don't understand?

How would you say the item in your own words?

Did you find any of the questions difficult to answer? If yes, which one(s)?

Can you share with me the comments/ annotations you made about the items?

Why did you make [insert comment]? Tell me about your thought process regarding this comment?

Is there an item that you think is missing?

What overall additions/changes/alternatives do you think can be made to the survey?

Appendix F

Histogram Visuals for All CLBS-1 Items

DC2

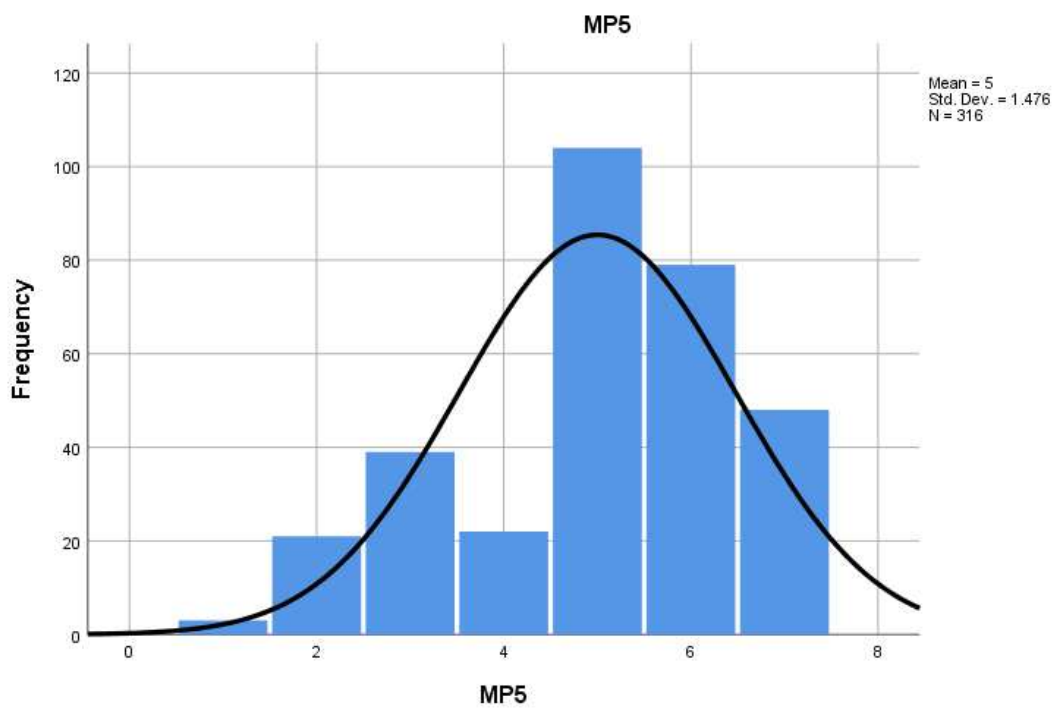Mean = 5.97
Std. Dev. = .93
N = 316

MP2

Mean = 6.43
Std. Dev. = .763
N = 316

SP2

Mean = 5.09
Std. Dev. = 1.505
N = 316

SP3

Mean = 5.72
Std. Dev. = 1.162
N = 316

SP4

SP5

MP3

Mean = 5.97
Std. Dev. = .808
N = 316

MP4

Mean = 5.59
Std. Dev. = 1.196
N = 316

MP5

MP6

MP7

Mean = 5.42
Std. Dev. = 1.264
N = 316

DC3

Mean = 5.54
Std. Dev. = 1.082
N = 316

DC4

Mean = 5.01
Std. Dev. = 1.41
N = 316

DC5

Mean = 5.32
Std. Dev. = 1.424
N = 316

TA1

Mean = 5.64
Std. Dev. = 1.308
N = 316

TA2

Mean = 5.52
Std. Dev. = 1.339
N = 316

TA3

Mean = 5.43
Std. Dev. = 1.359
N = 316

TA4

Mean = 5.95
Std. Dev. = 1.052
N = 316

TA5

Mean = 5.07
Std. Dev. = 1.333
N = 316

TA6

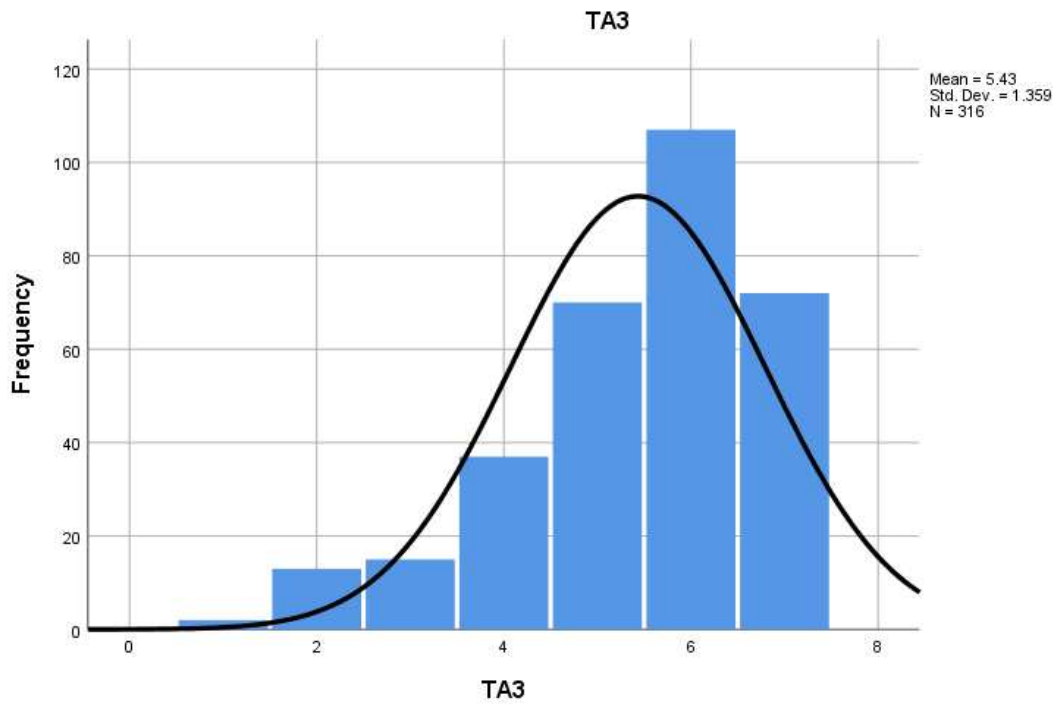Mean = 5.57
Std. Dev. = 1.106
N = 316

TA7

Mean = 5.17
Std. Dev. = 1.497
N = 316

Appendix G

CLBS-1 Modified Model

CLBS-1 Item	CLBS-1 Content Items	Item Code per Dimension
Item 1	I attempt to understand the sociopolitical systems in which we operate.	SP1
Item 2	I believe my view of teaching literacy is shaped by how I am/was taught at university.	SP3
Item 3	I believe that sociopolitical issues shape my view of teaching literacy.	SP5
Item 4	I believe that teaching literacy is a sociopolitical act.	DC4
Item 5	I believe that teaching literacy is a form of social activism.	DC5
Item 6	I seek out texts to use when teaching literacy where my students can reflect on social justice topics (e.g., race, class, poverty, homelessness, gender, etc.)	TA1
Item 7	I work on developing my view of teaching literacy with social justice in mind.	TA2
Item 8	I seek out diverse children's literature to share with my students.	TA4
Item 9	I take action in my community to promote social justice.	TA5
Item 10	I am developing lessons with critical literacy in mind.	TA6
Item 11	I try to put my view of social justice into practice.	TA7

Appendix H

Institutional Review Board (IRB) Approval Letter

University*of*Idaho
Office of Research Assurances

Institutional Review Board
875 Perimeter Drive, MS 3010
Moscow, ID 83844-3010
Phone: 208-885-6162
Fax: 208-885-6014
Email: irb@uidaho.edu

To: Margaret M. Vaughn

Cc: Sotirovska, Vera

From: University of Idaho Institutional Review Board

Approval Date: September 16, 2019

Title: Pre-Service Teachers' Perceptions of Critical Literacy Practices

Project: 19-190
Certified: Certified as exempt under category 1 & 2 at 45 CFR 46.104(d).

On behalf of the Institutional Review Board at the University of Idaho, I am pleased to inform you that the protocol for this research project has been certified as exempt under the category listed above.

This certification is valid only for the study protocol as it was submitted. Studies certified as Exempt are not subject to continuing review and this certification does not expire. However, if changes are made to the study protocol, you must submit the changes through VERAS for review before implementing the changes. Amendments may include but are not limited to, changes in study population, study personnel, study instruments, consent documents, recruitment materials, sites of research, etc.

As Principal Investigator, you are responsible for ensuring compliance with all applicable FERPA regulations, University of Idaho policies, state and federal regulations. Every effort should be made to ensure that the project is conducted in a manner consistent with the three fundamental principles identified in the Belmont Report: respect for persons; beneficence; and justice. The Principal Investigator is responsible for ensuring that all study personnel have completed the online human subjects training requirement. Please complete the *Study Status Check and Closure Form* in VERAS when the project is completed.

You are required to timely notify the IRB if any unanticipated or adverse events occur during the study, if you experience and increased risk to the participants, or if you have participants withdraw or register complaints about the study.