A STUDY OF THE EFFECTIVENESS OF STATEWIDE MANDATED

PROFESSIONAL DEVELOPMENT

by

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Dedication

This research is dedicated to teachers. You change the world.

Acknowledgements

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ABSTRACT

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PROFESSIONAL DEVELOPMENT

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The purpose of this mixed methods study was to investigate the impact and effectiveness of state mandated professional development on participant knowledge and practice while highlighting participant experiences with the professional development. This study utilized embedded pre and posttest module scores of 64 participants and interview data from ten participants who attended the blended model of the Texas House Bill 3 Reading Academies during the 2021-2022 school year. The quantitative results of this study indicated statistically significant growth in teacher knowledge based on the pre and posttest module scores on all modules except establishing a literacy community. The qualitative data revealed four major themes and four subthemes. The major themes were conflicting experiences with professional development, challenges with delivery/modality of professional development, background experience makes a difference in professional development, and professional development implementation. Within the delivery theme,

the following sub themes emerged: authenticity, feedback, collaboration, and time. The results revealed overall negative experiences and some impact on classroom practice. Additionally, interview data revealed the Texas House Bill 3 Reading Academies blended model of delivery as ineffective for some participants while effective for few participants for various reasons. The research concludes with implications for campus, district, and state leaders and recommendations for future research.

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CHAPTER I:

INTRODUCTION

The state of Texas has a history of mandating literacy professional development (Denton, 1997; Texas Education Agency, 2019). In 1996, Texas Governor George Bush challenged Texas educators to improve reading scores with the goal of all students reading on or above grade level by the end of third grade, through the Texas Reading Initiative (Denton, 1997). In 2015, Texas Senate Bills 925 and 972, established literacy achievement academies with the goal of "[growing] teachers' knowledge, understanding, and systematic use of effective research-based, and scientifically validated reading instruction methods for students" (Texas Education Agency, 2018). These particular reading academies were provided through a grant called The Reading Excellence and Academies Development (READ) in which TEA provided the professional development content digitally and in person to grantees over fifteen months outside of school hours (Texas Education Agency, 2018).

In 2017, as a result of low test scores on the National Assessment of Educational Progress (NAEP), Texas has mandated that every preservice teacher seeking a kindergarten through eighth grade teaching certification is required to take a science of teaching reading exam (Texas Education Agency, 2021). Furthermore, the state has mandated that every teacher in the state teaching kindergarten through third grade, elementary administrators, and any individual who teaches children in small groups must attend and pass the Texas House Bill 3 Reading Academy by the end of the 2022-2023 school year (Texas Education Agency, 2020). The goal of Texas House Bill 3 Reading

Academies is to "increase teacher knowledge and implementation of evidence-based practices to positively impact student literacy achievement" (Texas Education Agency, 2020, p.2). Though the House Bill 3 Reading Academies is not the state's first attempt at mandating professional development in literacy instruction, the current reading academies, and teacher certification exams, mandated through House Bill 3, are based on the science of reading (Texas Education Agency, 2020). This study seeks to examine the influence of the House Bill 3 Reading Academies on participant knowledge and practice related to the literacy content delivered through this professional development.

Research Problem

Literacy skill development in the primary grades is essential for reading proficiency and reading success in subsequent grade levels (Ehri & Flugman, 2017). In 2017, the Texas Commission on Public School Finance conducted research that reported approximately 65% of 4th and 8th grade students who participated in the NAEP Reading Assessment in Texas scored below proficient (Texas Commission on Public School Finance, 2018). As a result, the 86th Texas Legislature mandated that all teachers in Texas teaching in a kindergarten through third grade receive the House Bill 3 Texas Reading Academy training by the end of the 2022-2023 school year in order to "increase teacher knowledge and implementation of evidence-based practices to positively impact student literacy achievement" (Texas Education Agency, 2019, p.6).

Professional development hours for teachers are required by the state of Texas as per the Texas Administrative Code (Texas Education Agency, 2022). Because of this requirement, it is important to determine what makes professional development effective. According to research, effective professional development includes the following features: content focused, active learning, collaboration, modeling effective practice,

coaching and expert support, feedback and reflection, and sustained duration (Darling-Hammond et al., 2017; Desimone, 2009; Richardson, 2003; Birman et.al., 2000). Furthermore, it is necessary to understand the ways in which professional development can impact education. Results of research involving the impact of professional development remain mixed. Teacher knowledge in some cases is increased whereas in others, there is no significant change in teacher knowledge (Folsom et al., 2017; Piasta et al., 2017; Podhajski et al., 2009 Stark et al., 2019). Another aspect explored in the research is the impact of professional development on classroom practice which consistently shows that professional development can impact or change classroom practices (Cunningham, et al., 2015; Parsons et.al., 2019; Perkins & Cooter, 2013; Piasta et al., 2020). Research on professional development and classroom practice does not, however, reveal what factors contributed to the impact or change in classroom practice.

Though the state of Texas requires teachers to have professional development hours every year, literacy achievement academy mandates, beginning in the late 90s, early 2000s, have continued throughout the years. The results of research and reports surrounding past mandated professional development in Texas remain mixed in their findings (Boatman, 2003; Gibson, 2004; Hawk et al., 2011; O'Conner et al., 2009; Stewart, 2003). In some cases, teachers were able to apply what they learned through the professional development in their classrooms and stakeholders noted the professional development as being high quality, but teachers' perceptions and strategy use were inconsistent (Boatman, 2003; Gibson, 2004; Hawk et al., 2011; O'Conner et al., 2009; Stewart, 2003). The most recent state mandated professional development, Texas House Bill 3 Reading Academies, is similar to past mandated literacy professional development in Texas with a similar goal. Examining the current reading academies will add to the

existing body of research as well as reveal ways the Texas House Bill 3 Reading Academies impacted teachers and literacy specialists required to attend, if at all.

Significance of the Study

Investigating the impact of the Texas House Bill 3 Reading Academies could benefit national, state, and school district leadership. One of the many tasks associated with educational leadership is to ensure that students are performing on national and state assessments. Teachers are responsible for ensuring their instruction is conducive to high levels of achievement for all students. If teacher knowledge is lacking in a certain area of instruction, leaders must take measures to ensure teachers have the professional development they need to be successful. This study could serve as a framework for other states who wish to improve teacher knowledge in all domains of literacy.

This study could also benefit teachers of early literacy. Cunningham et al. (2004) asserts that often teachers believe they are more knowledgeable than they actually are, leading some to overestimate their knowledge. This could inhibit teachers from being more receptive to new ideas presented throughout professional development (Podhajski et al., 2009). If teachers find value in attending professional development, they can gain knowledge and new strategies to better support students in their classroom.

This study will examine the impact and effectiveness of state mandated professional development on teachers and literacy specialists, who are required to attend the Texas House Bill 3 Reading Academies, by examining pretest and posttest module scores alongside interview data. Local and state leadership will be able to determine the value of providing educators with sixty hours of topic focused professional development delivered online to a large group of educators.

Research Purpose and Questions

   The purpose of this study is to investigate the impact and effectiveness of the Texas House Bill 3 Reading Academies on participant knowledge and practice related to the literacy content presented through the professional development. Each quantitative research question will examine the following learning module topics from the professional development: (1) science of teaching reading, (2) establishing a literacy community, (3) using assessment to inform instruction, (4) oral language and vocabulary, (5) phonological awareness, (6) pre-reading skills, (7) decoding, encoding, and word study, (8) reading fluency, (9) reading comprehension, and (10) composition.

   RQ 1: Is there a difference in pre- and posttest module scores by participant role?

   RQ 2: Is there a difference in pre- and posttest module scores by grade level taught?

   RQ 3: What can we learn about state mandated professional development from teachers and literacy specialists through their experiences with the Texas House Bill 3 Reading Academies?

Definitions of Key Terms

Alphabet Knowledge- "the ability to recognize and name uppercase and lowercase letters, recognize letter symbols in print, and know that there are sounds associated with each letter" (Reading Rockets, 2023, para. 1)

Assessment- "wide variety of methods or tools that educators use to evaluate, measure, and document the academic readiness, learning progress, skill acquisition, or educational needs of students" (The Glossary of Education Reform, 2015, para. 1)

Canvas- An online learning management system through which a blended cohort will participate in the House Bill 3 Reading Academy content.

Cohort- A group of participants following the same learning path during a particular year.

Comprehension- "Making meaning of what is viewed, read, or heard. Comprehension includes understanding what is expressed outright or implied as well as interpreting what is viewed, read, or heard by drawing on one's knowledge and experiences. Comprehension may also involve application and critical examination of the message in terms of intent, rhetorical choices, and credibility." (International Literacy Association, 2023, Literacy Glossary C)

Decoding- "(reading). (1) Using one or more strategies to identify a printed word and its meaning; (2) Using knowledge of the logic of the written symbol system (especially letter–sound relationships and patterns in alphabetic orthographies) to translate print into speech; encoding involves translating speech into print using this knowledge." (International Literacy Association, 2023, Literacy Glossary D)

Encoding- "(writing). Involves translating speech into print using the knowledge of the logic of the written symbol system (especially letter–sound relationships and patterns in alphabetic orthographies)." (International Literacy Association, 2023, Literacy Glossary E)

Fluency- "The ability to act (speak, read, write) with ease and accuracy. Research indicates that oral reading fluency is the ability to read text accurately, with sufficient speed, prosody, and expression. It is an essential component of reading because it permits the reader to focus on constructing meaning from the text rather than on decoding words." (International Literacy Association, 2023, Literacy Glossary F)

*Literacy Community- "*dynamic classroom environments that are rich in social relationships, in partnerships, and in collaborations involving talking, reading, thinking, and writing" (Rousculp & Maring, 1992, p. 384)

Literacy Specialist- A participant who is either a literacy coach or works with small groups of students on reading acquisition.

Module- An online learning topic in which participants learn using various teaching techniques through the online learning management system.

Oral Language- "Oral language encompasses both speaking and listening. Oral language skills include learning how spoken words sound, what words and sentences mean, and how to communicate ideas." (Reading Rockets, 2023, para. 1)

Phonological Awareness- "Awareness of sounds of words in learning to read and spell. (*Note*: The constituents of words can be distinguished in three ways: (1) by syllables, as /boˇok/, (2) by onsets and rimes, as /b/ and /oˇok/, or (3) by phonemes, as /b/ and /oˇo/ and /k/." (International Literacy Association, 2023, Literacy Glossary P)

Print Concepts (Concepts of Print)- "Understandings of written language acquired by young children as they interact with literate persons and text and as a result of their membership in a literate society. For example, in English, children learn how print is organized (i.e., top to bottom, left to right), the purpose of the spaces between letters and punctuation, and the relationship of graphics and text. As they develop as readers, children acquire concepts such as letters, words, and sentences." (International Literacy Association, 2023, Literacy Glossary P)

Science of teaching reading- "A term that, in the broadest sense, refers to a corpus of peer-reviewed research on how we learn to read and develop as readers. The International Literacy Association defines SOR as a convergence of accumulated and evolving findings from research regarding reading processes and reading instruction (pedagogy) and how the two are implemented across contexts that interactively bridge cultural, social, biological, psychological, linguistic, and historical bases of learning." (International Literacy Association, 2023, Literacy Glossary S)

Teacher- A participant who is assigned a general education or special education class PK-2nd grade.

Word Study- "Approach to explicit teaching of phonics, word recognition, spelling, morphology, and vocabulary based on students' orthographic development." (International Literacy Association, 2023, Literacy Glossary W)

Conclusion

The purpose of this study is to examine the impact and effectiveness of the Texas House Bill 3 Reading Academies on participant knowledge and practice of literacy content delivered through the Texas House Bill 3 Reading Academies. This chapter provided the research problem, significance of the study, research purpose and questions, and definitions of key terms. In Chapter II, the researcher will present an examination of current literature on this topic.

CHAPTER II:

REVIEW OF THE LITERATURE

This chapter will examine current literature related to professional development

and its impact on knowledge and evidence-based practices related to its use in

classrooms. The purpose of this study is to investigate the impact of the Texas House Bill

3 Reading Academies on teacher and literacy specialist knowledge and practice related to

content delivered through the Texas House Bill 3 Reading Academies. The outcome of

this study will result in providing information on how effective the state mandated

professional development was for teachers and literacy specialists. To address these

areas, this literature review focuses on: (1) professional development, (2) impact of

professional development, (3) teacher knowledge of literacy, and (4) literacy professional

development mandates in Texas.

Professional Development

Professional development is a term used to describe a wide range of specialized

support for stakeholders to equip teachers with knowledge and skills to support students

(Learning Forward, 2008). Professional development as defined by Little and

Richardson-Koehler (1987) describes the term as anything that is intended to improve the

performance of paid staff members within an organization. According to Nguyen (2018)

"professional development refers to processes and activities that change the professional

knowledge, skills, attitudes, and actions of individuals" (p.33). Varying definitions of the

term exist as well as a broad range of what constitutes professional development

activities. This can include anything from formal content, planned workshops, to informal

discussions with coworkers (Desimone, 2009).

Within the field of education, professional development is often a required

component of educators' yearly job duties as per the Texas Administrative Code (Texas

Administrative Code §232.11, 2012). In some cases, teachers are required to attend a certain number of hours of professional development in order to maintain their content certifications or receive contract renewals with their employers (Kennedy, 2016). National legislation such as the Every Student Succeeds Act (ESSA, 2015), state that professional development is activities that "are an integral part of school and local educational agency strategies for providing educators (including teachers, principals, other school leaders, specialized instructional support personnel, paraprofessionals, and, as applicable, early childhood educators) with the knowledge and skills necessary to enable students to succeed in a well-rounded education and to meet the challenging state academic standards. The ESSA also states that professional development should be "sustained (not stand-alone, 1-day, or short term workshops), intensive, collaborative, job-embedded, data-driven, and classroom-focused, and "may include activities that improve and increase teachers' knowledge of the academic subjects the teachers teach and understanding of how students learn" (2015). Because professional development activities "are an integral part of school and local educational [agencies]", professional development is a way to promote state and local initiatives such as the House Bill 3 Texas Reading Academies (ESSA, 2015). Due to the nature and intentions of professional development activities, it is necessary for educational researchers to study professional development to determine its efficacy and its impact towards its purpose (Darling-Hammond et al., 2017; Desimone, 2009).

Effective Professional Development

Effective professional development involves many key features which result in an increase in teacher knowledge, improvement in practice, and better outcomes for students (Birman et.al., 2000; Darling-Hammond et al., 2017; Desimone, 2009; Richardson, 2003). Darling-Hammond et.al. (2017), defines effective professional development as

"structured professional learning that results in changes in teacher practices and improvements in student learning outcomes" (p. v). Effective professional development includes seven shared features: content focused, active learning, coaching, expert support, and collaboration, modeling effective practice, feedback and reflection, and sustained duration (Darling-Hammond et al., 2017; Desimone, 2009; Richardson, 2003; Birman et.al., 2000).

Content Focused

Professional development has the most impact when it is content-focused (Birman et al., 2000; Darling-Hammond et.al. (2017). This means that professional development intended to improve student literacy outcomes, for example, should be provided to teachers who teach in the literacy content area. A content-focused, literacy professional development study conducted by Ehri & Flugman (2017), examined the effectiveness of a year-long professional development aligned with systematic phonics instruction. The initial literacy training consisted of 45 hours of professional development followed by a year-long mentoring partnership in which mentors prepped and modeled lessons with teachers, which ended up being ninety hours of professional development. Throughout the mentorship process, mentors rated the teachers they worked with in relation to their ability to use their knowledge to instruct systematic phonics. The mentors reported four times throughout the duration of the school year. The results indicate that teachers began the training with limited content knowledge and skills, and as the year progressed, teachers' knowledge and competence gradually increased as well as student gains in reading and spelling skills.

Active Learning

Active learning in professional development is the idea that educators' learning experiences should involve hands-on, engaging activities directly involved with the

content matter being learned. This should be connected to the participants' classrooms and students through authentic learning with student artifacts, collaboration, modeling, and feedback (Darling-Hammond, 2017; Desimone, 2009). In a study conducted by Greenleaf et al. (2011), high school biology teachers participated in an active-learning professional development over the course of a school year which involved integrating academic literacy into a biology class. The educators participated in ten separate professional development sessions and collaborated throughout the school year. The findings of the study show that students who had teachers participating in the professional development outperformed control group students on standardized tests in English Language Arts, Reading Comprehension, and Biology.

Collaboration

Another aspect of effective professional development involves collaboration (Darling-Hammond et.al., 2017; Desimone, 2009; Richardson, 2003; Garet et.al., 2001; Birman et.al., 2000). Collaboration involves learning with others whether that is one to one or in small groups. Research supports the idea that collaborative professional learning results in improved outcomes for teachers and students (National Commission on Teaching & America's Future, 2016). In a review conducted by Darling-Hammond et al., (2017), 32 out of 35 studies involved some aspect of collaboration through professional development that resulted in positive outcomes. A study conducted by Folstom et al. (2017) teachers participated in a mandated literacy professional development in collaboration with a literacy coach to improve their knowledge and practice of early literacy instruction. Participants were given the *Teacher Knowledge of Early Literacy Skills Survey* as a pre- and posttest. The results showed gains in teacher knowledge. Furthermore, literacy coaches spent two to three days per week in the schools they were assigned to support teachers in literacy instruction and observe their classroom

practice throughout the professional development. Results also indicate that teacher classroom practice improved with regard to early literacy instruction as well as student outcomes.

Coaching and Expert Support

Coaching and expert support as a form of or integrated with professional development intersects with other aspects of effective professional development such as collaboration and modeling (Guskey & Yoon, 2009). Research involving coaching or expert support in professional development shows positive outcomes for teachers and students (Neuman & Cunningham, 2009). In a study conducted by Landry et al., (2009), participants went through one of four combinations of professional development. One group received mentoring paired with in depth literacy professional development, another group received only in depth literacy professional development, another group received only mentoring with limited literacy professional development, the last group received no mentoring and limited literacy professional development. The group that received the in depth literacy professional development paired with mentoring showed the greatest improvements in student and teacher outcomes.

Modeling Effective Practice

The use of models and modeling is another aspect of effective professional development that results in improved outcomes for teachers and students (Darling-Hammond et al., 2017). Modeling "can include video or written cases of teaching, demonstration lessons, unit or lesson plans, observations of peers, and curriculum materials including sample assessments and student work samples" (Darling-Hammond et al., 2017, p. 11). A study conducted by Gallagher et al. (2017) involved professional development aimed at improving the teaching of argument writing at the secondary level. This professional development included 90 hours of professional learning activities over

two years including the use of demonstration lessons. The results of this study show that participation in this professional development resulted in improved student quality of writing (Gallagher et al., 2017).

Feedback and Reflection

Feedback and reflection are another aspect of effective professional development that intersects with other aspects such as coaching or mentoring and modeling, but can occur outside of those spaces (Darling-Hammond et.al., 2017). According to Darling Hammond et al. (2017), "professional development models associated with gains in student learning frequently provide build-in time for teachers to think about, receive input on, and make changes to their practice by providing intentional time for feedback and/or reflection" (p.14). In the Landry et al. (2009) study, the mentoring provided involved in-depth classroom feedback and reflection as well as in depth student work analysis. In the randomized controlled study, students of teachers who received the in-depth classroom feedback and reflections showed greater gains in literacy outcomes.

Sustained Duration

Though there is not a clear consensus as to a specific time allotment of effective professional development, there is evidence that sustained duration yields better outcomes than a one-time workshop (Darling-Hammond et.al., 2017; Birman et al., 2009; Richardson, 2003). In a review conducted by Yoon et al. (2007), nine studies were reviewed to determine how teacher professional development improved student outcomes. The number of hours teachers participated in professional development activities ranged from five to one hundred hours. Teachers who participated in more than 14 hours of professional development activities had better student outcomes than those who participated in less than 14 hours of professional development activities.

Research surrounding effective professional development is clear on the factors that make professional development effective. Characteristics of effective professional development are a content-focus, active learning, coaching, expert support, and collaboration, modeling effective practice, feedback and reflection, and sustained duration (Darling-Hammond et al., 2017; Desimone, 2009; Richardson, 2003; Birman et.al., 2000). When these factors are implemented, it can lead to an increase in teacher knowledge and improved student outcomes (Darling-Hammond et al., 2017).

Impact of Professional Development

Professional development is used as a tool to improve various aspects of the education field whether that is teacher knowledge, the use of a certain strategy, or the application of new curriculum. Regardless of the goal, it is important to determine the ways in which professional development impacts stakeholders. Commonalities exist among studies aimed at determining the impact of professional development. The studies presented in this review examine teacher knowledge, practice, and student outcomes within the field of literacy.

Teacher Knowledge

A common goal among mandated professional development initiatives is to improve teacher content-area knowledge. Because this is a similar goal of many professional development initiatives or mandates, it is important to understand what the research says with regard to whether or not professional development has an impact on teacher knowledge. There are many studies that exist, in part, to examine the impact of professional development on teacher knowledge that yield mixed results.

In a study conducted by Stark et al. (2019), participants underwent professional development involving oral language. The three participants went to four face to face learning sessions over the span of twelve months. The researchers analyzed participant

responses to the *Classroom Promotion of Oral Language Teacher Survey* (CPOL) before beginning professional development, right after professional development, and a year after professional development. One teacher's results showed no increase from the beginning to immediately after professional development and then decreased a year after professional development. Another teacher's knowledge began high at the beginning of the study and increased immediately following the professional development and remained high a year after. The final teacher's knowledge remained the same prior to professional development and immediately after but increased a year after the professional development. Beyond utilizing the CPOL Teacher Survey for this study, this study also utilized semi-structured interviews with participants. Among the participants who did not show growth in knowledge, one participant expressed enthusiasm to participate in the professional development, however, she did not express value in improving content knowledge which could be why she did not show much increase in her knowledge measures.

Piasta et.al. (2017) sought to determine the efficacy of a state sponsored literacy professional development on educator outcomes. Part of this study required teachers to take three different knowledge assessments used in previous research studies. The results of this study indicate that there was no significant change in knowledge on all three of measures used to determine knowledge of literacy. Overall, researchers determined that the state-sponsored professional development was ineffective and failed to achieve its intended goals for various reasons. One reason that was attributed to the lack of growth in knowledge was the possibility that the measure used to assess knowledge was not closely aligned with the content delivered throughout the professional development.

In 2013, Mississippi signed into law the Literacy Based Promotion Act which had the goal of every Mississippi student reading at grade level by the end of third grade

(Folsom et al., 2017). As a result, Mississippi's Department of Education was required to provide professional development to teachers in order to improve teacher knowledge related to early literacy skills. Schools in Mississippi in which students consistently underperformed on assessments were required to undergo state mandated professional development. This also required those target schools to obtain literacy coaches to support the professional development. The professional development was delivered in two phases in which participants went through a combination of online coursework and face to face workshops. Teachers who went through this mandated professional development were given the *Teacher Knowledge of Early Literacy Skills Survey (TKELS)* prior to beginning the training, twice during the training, and again after receiving the training. The results of this study showed gains in teacher knowledge as they underwent the professional development (Folsom et al., 2017). Teachers who participated in the professional development from spring 2014 to fall 2015 scored in the 48th percentile on the *TKELS* prior to participating in the professional development and in the 59th percentile after completing the professional development. Although there was an increase in teacher knowledge, researchers note the design of the study does not allow for knowledge changes to be attributed to the professional development.

In another study aimed at examining the impact of professional development on teacher knowledge, Podhajski et al., (2009) conducted a study regarding the influence of professional development in scientifically based reading instruction on teacher knowledge and reading outcomes. The study participants attended 35 hours of professional development while being coached by mentors for a year. The topics included in the professional development were phonemic awareness, phonics, and fluency. A control group of teachers were compared to the study participants. Both groups took *The Survey of Teacher Knowledge* prior to the professional development and after the

professional development to determine growth in knowledge. Teacher knowledge in the experimental group was initially lower than the control group, but after undergoing the study and professional development, teacher knowledge in the experimental group exceeded the control group. The results of this study indicate that professional development can improve teacher knowledge in the area of literacy. Although there was growth in knowledge shown in this study, the researchers caution about the generalizability of the results due to a small sample size.

The aforementioned research shows there are mixed results as to whether or not mandated professional development impacts teacher knowledge. In some cases, such as the Stark et al. (2019) and Piasta et al. (2017) study, teacher knowledge was not impacted by professional development whereas in the studies conducted by Folsom et al. (2017) and Podhajski et al. (2009) teacher knowledge was impacted. Further research in this area will add to the existing body of research while providing insight into whether or not a statewide literacy professional development mandate such as the Texas House Bill 3 Reading Academies impacts teacher knowledge. More research is needed to gain a more thorough understanding as to why professional development does or does not impact teacher knowledge in the area of literacy.

Teacher Practice

Teacher practice is the method in which teachers deliver content within the classroom. Often, professional development aims to improve or change teacher practice. For example, Mississippi issued statewide mandated professional development to target schools aimed at changing and improving teacher classroom practices to improve student literacy outcomes. As a result of professional development goals such as this, it is important to understand the ways in which professional development improves or

changes teacher practice, if at all. Current research that seeks to examine the impact of professional development on teacher practice varies in data collection and results.

A study conducted by Perkins and Cooter (2013) investigated the efficacy of a literacy academy on teacher practices after attending professional development on various literacy topics. The sample for the study was 144 teachers teaching kindergarten through grade six as well as special education teachers, instructional facilitators, literacy leaders and one reading specialist. The professional development totaled 150 hours over two semesters with 60 of those hours being job embedded. Teacher practice was measured using an observational tool to determine how much teachers were using the information taught in the professional development. The classroom observation results revealed that there was some observance of the content taught through the professional development, but that beginning reading and readiness activities were rarely observed as well as writing activities.

In a similar study, Parsons et.al. (2019) sought to determine how a professional development partnership with a university impacted teacher practices utilizing interviews, surveys, and observations. With regard to observations, the researchers noticed teachers using differentiated instruction more often as opposed to whole group instruction, however, authentic reading and writing activities were absent. The end of the professional development survey indicated some teachers felt the professional development did change their practice. Although results were mixed, researchers in this study note that there was a positive trend in teacher perception of improved literacy instruction.

Another study, reliant upon observational data to determine how professional development impacted classroom practices, examined pre and post professional development classroom practices. Cunningham et al., (2015), observed early educator practices in phonological awareness prior to receiving professional development in which

they determined there was low quality and quantity present in the classrooms. Post professional development observations indicate there was improvement in the quantity and quality of classroom practices related to phonological awareness. In contrast, Piasta et al. (2020) observed teachers after receiving at-scale state sponsored professional development in early childhood literacy practices in which the researchers concluded had minimal effects on teacher practices.

Research in the area of professional development and teacher practice suggests that professional development is a tool that can improve or change some aspects of teacher practices (Perkins & Cooter, 2013; Parsons et.al., 2019; Cunningham, et.al., 2015; Piasta et al., 2020). Though the studies summarized rely upon similar methodologies and data collection procedures, more research is needed in this area to determine what aspects of professional development helped teachers improve or change their practices. Furthermore, further research in this area could add to the existing body of research by seeking to examine why some professional development activities did not improve or change teacher practices.

Teacher Perceptions and Self-Efficacy

Teacher perceptions and self-efficacy are often included in research involving professional development (Tschannen-Moran & McMaster, 2009; Smith & Williams, 2020; Smith & Robinson, 2020). Teacher perceptions are the ways in which teachers understand professional development content and teacher self-efficacy involves a teacher's belief or confidence in executing the content taught through professional development (Tschannen-Moran & McMaster, 2009; Smith & Williams, 2020). According to Tschannen-Moran & McMaster (2009), teachers' self-efficacy with regard to professional development "plays a role in teachers' implementation of new teaching strategies" (p. 231) while teachers' perceptions of professional development aids

researchers in determining the impact of professional development. Both perceptions and self-efficacy are examined in research using surveys and interviews. Overall, the research involving teacher perceptions and self-efficacy with regard to literacy professional development involve mixed outcomes (Tschannen-Moran & McMaster, 2009; Smith & Williams, 2020; Smith & Robinson, 2020).

Tschannen-Moran & McMaster (2009) conducted a study that involved participants who received four different literacy professional development formats over the same topic and attempted to relate those formats to teachers' sense of self-efficacy. The formats included a combination of a standalone workshop, a workshop and modeling; a workshop, modeling, and practice; and lastly a workshop, modeling, practice, and coaching. In this study, researchers found that initial surveys showed high mean scores of self-efficacy that researchers relate to participants' overall confidence in their ability to teach literacy. Two of the treatment groups showed a decrease in self-efficacy throughout the professional development due to the type of professional development format delivered while one treatment group involving coaching saw an increase in self-efficacy. This led researchers to the conclusion that professional development with follow up and authentic learning experiences are beneficial to teachers' sense of self-efficacy.

In a study conducted by Smith & Williams (2020), teachers voluntarily attended a literacy professional development within the domains of reading, writing, vocabulary, and diverse learners in the middle school classroom. The professional development was delivered in Professional Learning Communities format throughout the course of five months in which the researchers determined the needs of the participants prior to planning face to face learning sessions. The researchers sought to examine the impact of professional development on participants' understanding and use of the strategies taught

through the professional development by utilizing a combination of pre and post professional development perception surveys, interviews, and observational data. The post professional development survey and interview results of this study indicate that teachers' confidence in teaching the topics presented in the professional development increase. Furthermore, the results showed teachers used the content taught through the professional development in their classroom. While the study showed an overall increase in confidence among participants, one of the areas that showed some lack of confidence was teaching literacy to diverse learners. Furthermore, the participants noted the need for further professional development topics related to teaching struggling learners reading and writing.

Smith & Robinson (2020) conducted a qualitative case study involving teacher perceptions of a content area literacy professional development program. The professional development was initially provided by consultants; however, the district utilized a trainer of trainer model of delivery in which the consultants trained a group of teachers first then those teachers taught the remaining teachers required to attend the professional development. One question the researchers sought answers to was how capable participants felt teaching the content following professional development. The responses from participants varied with some positive and negative perspectives. Researchers attributed the negative perspectives to forced compliance, or teachers not having any voice regarding their participation in the professional development, or the implementation of the strategies presented in the professional development. Overall, teachers felt negatively towards the professional development and noted they felt unprepared to integrate literacy into their classroom, however, participants did see the value in using the literacy strategies in their classroom.

Research in the area of literacy professional development with regard to teacher perceptions and self-efficacy involve varying results. In some cases, literacy professional development increases teachers' sense of self-efficacy while in other cases, teachers' sense of self-efficacy can decrease (Smith & Williams; 2020; Tschannen-Moran & McMaster, 2009). Furthermore, research shows the varying perceptions teachers have of professional development activities (Smith & Robinson; Yates, 2007). While research reveals teachers' perceptions and sense of self-efficacy after attending literacy professional development, more research is needed in this area to determine what factors of professional development caused self-efficacy to decrease or increase and negative perceptions and positive perceptions.

Teacher Knowledge of Literacy

Teacher knowledge plays a critical role in the literacy classroom and is essential for teaching literacy skills as argued by Moats (1994). Furthermore, Podhajski et al (2009) argues that "knowledge of language structure and understanding of language and reading development are two of the essential prerequisites for providing informed reading instruction" (p. 405). Research has shown that teacher knowledge of language, reading, and writing development are insufficient for teaching literacy skills (Moats, 1994; Cunningham et at., 2004; Joshi et al., 2009; Crim et al., 2008; Cunningham, Zibulsky, & Callahan, 2009; Pittman et al., 2020). Additionally, in some cases, teachers believe they are more knowledgeable than they actually are (Cunningham et al., 2004; Al-Hazza, 2008).

In a study conducted by Cunningham, et., al., (2004), the researchers sought to examine the relationship among teacher knowledge and perceived knowledge levels related to the domains of children's literature, phoneme awareness, and phonics. The researcher surveyed 722 kindergarten through third grade teachers from 48 elementary

schools in a large, urban school district in California. The researchers surveyed teachers in the areas of disciplinary knowledge and self perceptions of knowledge. The *Title Recognition Test* was used to assess the domain of children's literature, a phonological awareness task was used to assess the domain of phonological awareness, and two different tasks that proved to be reliable were used to assess the domain of phonics. To calibrate teacher perceptions of knowledge within the three domains, participants were asked to respond to various questions and rate their perceived knowledge.

The results of this study indicate an overall lack of participant knowledge within the three domains. Within the domain of children's literature, 90% of teachers were unfamiliar with popular children's literature during the time of this study. Within the domain of phonological awareness, the researchers found that 37% of teachers in the study sample "could not do what we commonly ask a kindergarten child to do" (Cunningham et al., 2004). Within the domain of phonics, the researcher concluded that overall performance on tasks related to explicit phonics was poor. When it came to the results of actual versus perceived knowledge, researchers found there to be a lack of calibration of knowledge based on survey data which indicates teachers within this study lacked knowledge in areas without knowing they lacked knowledge.

According to Crim et al. (2008), teachers must be "adequately prepared to teach" early literacy skills (p.18). Crim et al. (2008), performed a study on 64 early childhood teachers in the Houston area who voluntarily chose to be a part of the study. The teachers involved in this study were surveyed to determine their initial background knowledge of language structures related to early literacy skills. The results demonstrated inconsistencies in teacher knowledge thus prompting the researchers to indicate a need for literacy professional development for teachers in order to improve knowledge of language structures related to early literacy skills. Furthermore, the researchers in this

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study argue the need for preservice teacher training on these skills to better prepare them to teach students to read successfully through early literacy skill development.

Though this study shows a need for providing professional development to improve teacher knowledge, it does not seek to determine what happened to teacher knowledge after they underwent professional development. Furthermore, this study only involved teachers who work with children aged three, four, and five. Because early literacy skills are taught beyond early childhood and well into primary grades, this data cannot be generalized to all teachers who are expected to develop children's early literacy skills.

Most recently, Pittman et al. (2020) sought to examine teacher knowledge about language constructs who are responsible for teaching students at low socio-economic status schools. The researchers surveyed 150 urban elementary teachers using a previously validated instrument. The results of this study indicate that teacher knowledge of language constructs is insufficient for teaching students in low socio-economic schools due to high levels of knowledge indicating better student outcomes.

To address insufficient teacher knowledge, states such as Texas, have mandated statewide professional development to improve teacher knowledge of evidenced-based literacy practices. Due to mandated professional development, it is important to examine what researchers have determined the role knowledge has within the literacy classroom.

Impact on Student Outcomes

A teacher's literacy knowledge impacts classroom practice and increases student outcomes (Hudson, 2022; McCutchen et.al., 2002; Piasta et.al., 2020; Piasta 2019). Piasta et al. (2020) conducted a study to determine the relationship between educators' knowledge and emergent literacy practices in which they found general linear associations between participants' knowledge and practice. Similarly, McCutchen et al.

(2002) observed teacher practices in early literacy instruction throughout a school year after receiving a professional development institute. They concluded that teachers used their knowledge to change their classroom practices thus influencing student outcomes in literacy.

Recent studies have sought to associate teacher knowledge with student outcomes. In a study conducted by Carlisle et al. (2011), the researchers found small effects regarding teacher knowledge on student outcomes. This means that in the context of this study, teacher knowledge did not have much of an effect on student outcomes. In contrast, Piasta et al. (2019), found positive associations between teacher knowledge and student outcomes. Most recently, Hudson (2022) concluded that students who had teachers with higher literacy knowledge scored higher in reading comprehension activities. The results of these studies indicate that a teacher's literacy knowledge impacts student achievement, however more research is needed to further support this claim.

Current research that examines the impact of teacher knowledge on classroom practices and student outcomes indicates that knowledge of literacy is important to achieve the goals of various professional development initiatives. Additionally, the aforementioned research indicates that professional development can have an impact on student outcomes. Further research in this area would add to the existing body of research which seeks to examine the impact of teacher knowledge on student outcomes.

Literacy Professional Development Mandates in Texas

The Texas House Bill 3 Reading Academies is an example of a recent professional development initiative that seeks to improve teacher knowledge of literacy which should result in improving student outcomes in literacy. Historically, Texas has mandated literacy professional development since the late 90's because of state government pressure to raise student test scores, or literacy achievement rates. These

mandates have been researched, evaluated, and reported showing mixed results as to their impact and effectiveness towards achieving their goals (Boatman, 2003; Gibson, 2004; Hawk et al., 2011; O'Conner et al., 2009; Stewart, 2003;). When seeking to determine the effectiveness of mandated literacy professional development in Texas, it is important to understand the history behind such mandates.

Texas Reading Initiative

Texas has a history of mandating professional development dating back to Governor George W. Bush in 1996 (Denton, 1997; Texas Education Agency, 2019). Through the Texas Reading Initiative, Bush challenged Texas educators to improve reading scores with the goal of all students reading on or above grade level by the end of third grade (Denton, 1997). The Texas Reading Initiative mandated professional development, but each district had flexibility in implementation. As a result of this initiative, various literacy academies emerged. Partnerships among school districts, educational service centers, and universities were created to form academy type programs to ultimately improve literacy rates in Texas (Boatman, 2003). Several studies and evaluation reports sought to examine the effectiveness of reading academies implemented in the late 1990's and early 2000's. The results of these studies remain mixed.

A program evaluation conducted by Gibson Consulting Group (2004), commissioned by the Texas Education Agency, sought to evaluate this professional development. Through interviews, surveys, statistical analyses, and observations, the researchers reported increases in standardized test scores, favorable national reviews regarding the quality of the professional development, application of content learned during classroom observations, and positive responses on surveys with regard to the quality of the professional development and high levels of implementation. Similarly, Stewart (2003) reported that teachers felt better prepared to teach, increased their usage

of strategies taught through the academies, and 75% of teachers credited the professional development for student success. In contrast, Boatman (2003) used student standardized test scores to determine if the academies increased student outcomes but found no significant differences between groups of students who had reading academy teachers and those who did not in three out of four years of implementation. Consistent with Stewart (2003) and Gibson (2005), Boatman (2003) determined teachers utilized strategies taught through the professional development, however, the strategies they ranked as important were inconsistent from year to year.

Texas Adolescent Literacy Academies

Following the Texas Reading Initiative academies, to improve literacy achievement in middle grade classrooms, Texas initiated another professional development called the Texas Adolescent Literacy Academies (TALA) in 2007 (O'Conner et al., 2009). Developed by the Vaughn Gross Center for Reading, these academies focused on improving teaching in grades sixth through eighth in language arts and content area classrooms and involved instruction in the areas of phonics, fluency, vocabulary, and comprehension. The professional development consisted of three days of in person training as well as a one day of online practicum for English language arts teachers and one and a half days of in person training in addition to a half day online practicum for content area teachers (O'Conner et al., 2009). The only teachers required to attend this training were teachers at campuses with low accountability ratings, campuses that did not meet the state standards based on state test scores.

The Texas Education Agency contracted ICF International to conduct a statewide evaluation of the TALA to determine the quality of the training, the quality and level of ongoing implementation of the training, evaluation the effects of the training on student outcomes, and evaluate the cost-effectiveness of the training (O'Conner et al., 2009).

Phase one of the report included expert review of materials, observations of trainings, and perceptions of the trainings. The findings of this phase revealed the training was perceived as high quality by trainers and leadership (O'Conner, 2009).

Phase two of the report examined the influence of the academies. The study utilized administrator interviews, classroom observations, and teacher focus groups to gather data about the professional development from nine campuses across the state. Among the findings in this research, teacher interviews revealed they perceived the training as high quality and effective, however, some teachers felt the in-person training in which some presenters read directly from a script was problematic. Furthermore, some teachers reported behavior from presenters which made them feel like they were not treated like professionals. The observations revealed implementation of strategies taught through the professional development with the majority being vocabulary and comprehension instruction. Among the largest barriers to implementation of the TALA professional development was time for collaboration and planning. Additionally, teachers reported other barriers such as lack of buy in, lack of administrator knowledge, and risk of copyright infringement of TALA materials. Finally, the researchers concluded that teachers had mixed perceptions of the influence of the training on student outcomes in which some believed the training did influence student outcomes while others did not (Hawk et al., 2011).

Following the Texas Reading Initiative academies and the Texas Adolescent Literacy Academies, in 2015 Texas established renewed literacy achievement academies for educators serving kindergarten, first, second, and third grade. This version of the reading academies included professional development for lower elementary teachers and upper elementary teachers. The goal of this version of the literacy academies was to "grow teachers' knowledge, understanding, and systematic use of effective, research-

based, and scientifically validated reading instruction methods for students" (Texas Education Agency, n.d., p.3) called the Reading Excellence and Academies Development (READ) Grant. Unlike previous literacy academies, teachers received this professional development as a result of grant funding, so not all teachers in the state received the content delivered through this program. To the researcher's knowledge, no program evaluations or reports exist to determine the efficacy of this program.

Most recently, in 2017, Texas mandated a new round of professional development. The current initiative requires all teachers assigned to kindergarten, first, second, and third grade to attend literacy professional development titled the Texas House Bill 3 Reading Academies. Educators who received the Texas Reading Initiative academy training through the Reading Excellence and Academies Development (READ) in 2015 were not required to attend the Texas House Bill 3 Reading Academies.

House Bill 3 Reading Academies

In 2017, the Texas Commission on Public School Finance was tasked with examining the current state of public education finance (Texas Commission on Public School Finance, 2018). The result of this examination was Texas House Bill 3, signed in 2019 by Governor Greg Abbott. House Bill 3 is largely a finance reform bill, however, mandates related to student reading achievement also resulted from this bill to improve Texas students' reading outcomes. According to a 2017 NAEP report, Texas students ranked 42nd in the nation (NAEP,2017).

The Texas Commission on Public School Finance (2018) reported that approximately 65% of fourth and eighth grade students who participated in the NAEP Reading Assessment in Texas scored below proficient. As a result, the 86th Texas Legislature mandated that all teachers in Texas teaching a kindergarten through third grade class receive the House Bill 3 Texas Reading Academy training by the end of the

2022-2023 school year "to increase teacher knowledge and implementation of evidence-based practices to positively impact student literacy achievement "(Texas Education Agency, 2019).

The Texas House Bill 3 Reading Academies implementation guidance allows districts to utilize different options for professional development delivery including a blended or comprehensive model (Texas Education Agency, 2021). The blended model involves content delivery through an online platform with a cohort leader facilitating and grading work virtually. The comprehensive model involves cohort leaders who serve as coaches for in-person content delivery and coaching. Each option requires districts to pay for the professional development for every teacher who is required to go through the training. Regardless of implementation method, every teacher in the state received the same content.

For the purposes of this study, the HB 3 Reading Academies content delivery method chosen by the district involved in the study was a blended model. The content was delivered online through a learning platform, Canvas. Learners were first introduced to the science of teaching reading followed by establishing a literacy community and using assessment to inform instruction. After the initial modules, participants began targeted training on literacy components including oral language, phonological awareness, alphabet knowledge, print concepts, and handwriting, decoding, encoding and word study, reading fluency, reading comprehension, and composition. Within the phonological awareness module and the reading comprehension module, participants are required to submit a video artifact of their learning. Embedded within each module are checks for understanding quizzes and discussion boards, all of which must be completed and graded by the cohort leader responsible for monitoring participant progress. Following all of the modules, participants must complete a quiz to demonstrate their

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understanding of the content within the modules and pass the quiz to receive credit. Once a participant completed their learning, they received 60 hours worth of training and a certificate of completion.

According to the Texas Education Agency, as of March 9, 2022, approximately 90,000 teachers in the state of Texas have completed or are in the process of completing the Texas House Bill 3 Reading Academies. Upon beginning the 2022-2023 school year, Texas will be in year three of this state mandated professional development. A recent update moving into year three indicates that some changes will be made to the Reading Academies to ensure they are "more flexible, more efficient, and more effective" (Texas Education Agency, 2022). Year three adjustments for flexibility include knowledge demonstrations for teachers prior to attending the academy, teachers who passed the science of teaching reading exam will not have to complete all modules, math teacher exemptions, and extra time given to teachers with extenuating circumstances (Texas Education Agency, 2022). The adjustments that were made to make the academies more efficient included streamlines to ensure the time to complete the academies does not exceed sixty hours, cohort leaders will not grade artifacts, and a district completion verification on TEA website (Texas Education Agency, 2022). The final update, which is intended to improve the academy's effectiveness, gives school districts and state agencies more support with local implementation (Texas Education Agency, 2022). Among the provided updates for year three, TEA also provided districts with guidance as to what they can do to support teachers attending the academies. This guidance includes providing compensation and time to teachers required to attend the mandated professional development.

The Texas House Bill 3 Reading Academies are a statewide mandated professional development for every teacher who teaches students in kindergarten, first,

second, and third grade. The participants in this study were delivered the professional development content through an online learning system, Canvas, over the course of the 2021-2022 school year. The content delivered through the professional development are evidenced based practices in literacy instruction and the goal is "to increase teacher knowledge and implementation of evidence-based practices to positively impact student literacy achievement "(Texas Education Agency, 2022). This study will determine the impact and effectiveness of this statewide professional development.

Summary of Literature

Professional development within the context of education is a tool used to achieve certain outcomes such as increasing teacher knowledge related to a certain topic or providing teachers with various teaching strategies in a content area. Research supports the idea that effective professional development is "content focused, active learning, collaboration, modeling effective practice, coaching and expert support, feedback and reflection, and sustained duration (Birman et.al., 2000; Darling-Hammond et al., 2017; Desimone, 2009; Richardson, 2003). Furthermore, professional development can have an impact on teacher knowledge, teacher practice, and teacher perceptions and self-efficacy, though mixed results exist in some cases (Cunningham, et al., 2015; Folsom et al., 2017; Moran & McMaster, 2009; Piasta et al., 2017; Podhajski et al., 2009; Perkins & Cooter, 2013; Parsons et.al., 2019; Piasta et al., 2020; Smith & Williams; 2020; Smith & Robinson, 2020; Stark et al., 2019; Yates, 2007).

Teacher knowledge of literacy is a critical component in the literacy development of students (Moats, 1994). Research involving teacher knowledge of literacy suggests that teachers do not possess adequate knowledge for teaching literacy skills (Moats, 1994; Cunningham et at., 2004; Joshi et at., 2009; Crim et al., 2008; Cunningham, Zibulsky, & Callahan, 2009; Pittman et al., 2020). Furthermore, researchers have made

some associations between teacher knowledge having an impact on classroom practice and an increase in student outcomes (Hudson, 2022; McCutchen et.al., 2002; Piasta et.al., 2020; Piasta 2019).

Texas has a history of mandating literacy professional development for teachers with the goal of increasing teacher knowledge and student outcomes (Denton, 1997; Texas Education Agency, 2019). Research and reports that have examined the impact and effects of mandated professional development in Texas show mixed results as to their impact and effectiveness (Boatman, 2003; Stewart, 2003; Gibson, 2004; O'Conner et al., 2009; Hawk et al., 2011). Most recently, Texas has mandated a literacy professional development with the goal of increasing "teacher knowledge and implementation of evidence-based practices to positively impact student literacy achievement" (Texas Education Agency, 2019).

Theoretical Framework

When examining the impact and effectiveness of professional development, which involves adult learners, it is necessary to view the research through an adult learning lens. Furthermore, it is necessary that professional developers understand the way in which adults learn when mandating or implementing professional development activities, otherwise, the professional development will perhaps fail in achieving its intended outcomes. Adult learning theory can serve as a guide to those responsible for designing professional development to create conditions for adults to learn the information being presented to them. Adult learning theory, introduced by Knowles (1970), is the assertion that andragogy is the art and science of how adults learn. This principle operates under the assumptions that "adult learners' self-concept moves from being dependent to self directed, their experiences become resources for learning, their

readiness to learn is related to developmental tasks and social roles, and their time perspective changes to immediate application (Knowles, 1970, p. 44-45).

One of the foundations of adult learning as described by Knowles is adults' experiences. State mandated professional development typically does not take into account the experiences of participants. Furthermore, Knowles (1984) asserts there are specific conditions under which adults learn. Learners must "feel a need to learn", they must also be provided with an environment in which there is "mutual trust and respect" (p.85-87). Additionally, Knowles (1984) describes the adult learning process as "relevant to and makes use of the experiences of the learner" so "the learners have a sense of progress toward their goals" (p. 85-87). This study will address the impact and effectiveness of a state mandated professional development utilizing the experiences of adult learners.

Conclusion

This chapter contained a review of the literature related to the purpose of this study which will examine the impact of the Texas House Bill 3 Reading Academies. Chapter III will discuss the methodological aspects of this study as well as the research problem, and operationalization of theoretical constructs. Furthermore, Chapter III will discuss the research purpose, questions, design, population, and sampling selection. The instrumentation to be used, data collection procedures and analysis, privacy and ethical considerations, and limitations to the study will also be discussed.

CHAPTER III:

METHODOLOGY

The purpose of this mixed methods study was to examine the impact and effectiveness of the Texas House Bill 3 Reading Academies on participant knowledge and practice related to content delivered through the professional development. The study sample consisted of kindergarten teachers, first grade teachers, second grade teachers, and literacy specialists from a small suburban school district in Texas who attended the Texas House Bill 3 Reading Academy professional development during the 2021-2022 school year. The quantitative component analyzed scores on the module pre- and posttests using a repeated measures test. The qualitative component was collected through interviews with voluntary participants. This chapter will provide an overview of the research problem, operational theoretical constructs, the research purpose, and questions, research design, population and sampling selection, instrumentation, data collection procedures, data analysis, privacy and ethical considerations, and research design limitations.

Overview of the Research Problem

Early literacy skill development in the primary grades is essential for reading proficiency and reading success in subsequent grade levels (Ehri & Flugman, 2017). It is essential that teachers possess the knowledge and skills necessary to instruct students in all areas of literacy (Moats, 2009). The Texas Commission on Public School Finance reported data from a study conducted in 2017 that approximately 65% of 4th and 8th grade students who participated in the NAEP Reading Assessment in Texas scored below proficient (Texas Commission on Public School Finance, 2018). As a result, the 86th Texas Legislature mandated that all teachers in Texas teaching a kindergarten through

third grade class receive the Texas Reading Academy training by the end of the 2022-2023 school year to "increase teacher knowledge and implementation of evidence-based practices to positively impact student literacy achievement" (Texas Education Agency, 2020).

Operationalization of Theoretical Constructs

This study consisted of three constructs: (a) knowledge of content delivered through professional development, (b) school roles, and (c) grade level taught. Roles were broken down into teachers and literacy specialists. Participant knowledge was measured using the Texas House Bill 3 Reading Academy module pre and posttest scores. Pre and posttest scores were analyzed to determine if there was a difference in scores among teachers and literacy specialists, as well as the difference in scores among grade level taught.

Research Purpose and Questions

The purpose of this study was to examine the impact and effectiveness of the Texas House Bill 3 Reading Academies on participant knowledge and practice related to the literacy content presented through the professional development. Each quantitative research question examined the following module topics: (1) science of teaching reading, (2) establishing a literacy community, (3) using assessment to inform instruction, (4) oral language and vocabulary, (5) phonological awareness, (6) pre-reading skills, (7) decoding, encoding, and word study, (8) reading fluency, (9) reading comprehension, and (10) composition. This study addresses the following questions.

Research Questions

RQ 1: Is there a difference in pre and posttest module scores by participant role?

RQ 2: Is there a difference in pre and posttest module scores by grade level taught?

RQ 3: What can we learn about state mandated professional development from teachers and literacy specialists through their experiences with the Texas House Bill 3 Reading Academies?

Research Design

This study addressed the impact and effectiveness of the Texas House Bill 3 Reading Academies on participant knowledge and practice related to the content delivered through the Texas House Bill 3 Reading Academies. A mixed methods design was used and involved collecting quantitative data first and then using the results to inform qualitative data collection. The qualitative portion of this study focused on learning from the experiences of the participants about state mandated professional development. In the first, quantitative phase of the study, data from the Texas House Bill 3 Reading Academy professional development pre and posttest scores was analyzed to determine if there was a difference in scores between roles and grade levels. The second, qualitative phase was intended as a follow-up to the quantitative results, however, the quantitative results did not inform the qualitative portion of the study. As a result, the qualitative data was collected using semi-structured interviews with ten professional development participants to learn about state mandated professional development through their experiences.

Population and Sample

The population of this study consisted of teachers and literacy specialists in the state of Texas who are required to attend the Texas House Bill 3 Reading Academies. The state employs approximately 102,544 teachers and 9,467 literacy specialists who will be required to attend and pass the Texas House Bill 3 Reading Academies by the end of the 2022-2023 school year (Texas Education Agency, 2021).

The sample in this study included kindergarten teachers, first grade teachers, second grade teachers, and literacy specialists in a small suburban school district in southeast Texas who participated in the Texas House Bill 3 Reading Academies during the 2021-2022 school year. The school district employs approximately 88 teachers and six literacy specialists who were required to attend and pass the Texas House Bill 3 Reading Academies (Texas Education Agency, 2021).

Participant Selection

For research question one and research question two, participants were pre-selected based on their completion of the Texas House Bill 3 Reading Academies during the 2021-2022 school year within a particular cohort. There were seventeen kindergarten teachers, eighteen first grade teachers, nineteen second grade teachers, and ten literacy specialists used for the quantitative phase of the study. For research question three, participants were selected using convenience sampling from the N=64 participants used to answer research question one and research question two. Semi-structured interviews were conducted until saturation was achieved with ten professional development participants who agreed to participate in the study after written correspondence requesting their participation.

Instrumentation

Texas House Bill 3 Reading Academy Pre and Post Tests

The House Bill 3 Reading Academy pre and posttests were developed by TEA to align with the content presented in each module throughout the professional development as a way to measure learning (personal communication, October 10, 2022). The researcher attempted twice to obtain information regarding validity and reliability but was unable to obtain this information. After reaching out to TEA on several occasions to gain access to the validity and reliability of the pre and posttests, the researcher was

informed that "consequently, we do not have validity and reliability information to provide." (personal communication October 10,2022).

<div align="center">**Data Collection Procedures**</div>

Quantitative

The researcher obtained approval to conduct the study from the University of Houston Clear Lake (UHCL) Committee for the Protections of Human Subjects (CPHS) and the participating school district's the Institutional Review Board (IRB) before collecting any data. Following approval, the archival Texas House Bill 3 Reading Academy pre and post module tests scores were retrieved from the district cohort leader in charge of retaining the results of the module scores. These scores were for each module pretest and posttest participants were required to take within the professional development. There was no required score for the pretest, however, participants must score an 80 or higher in order to move on to their next learning module. Participants could test as many times as they needed to in order to obtain a score of 80 on the posttest. Once participants completed a module, the district cohort leader recorded their scores in a Google spreadsheet. It is unclear if the district cohort leader recorded their highest score, or their initial score on the posttest. Furthermore, it was not recorded how many times participants took the posttest to obtain a score of 80. Once the data was retrieved from the district cohort leader, the results were uploaded into the Statistical Package for the Social Sciences (SPSS).

Qualitative

The researcher obtained email addresses of the professional development participants from the cohort leader. Once email addresses were collected, the researcher solicited participation in the study. Further solicitation was made via text messages for participation in the study. Participants were required to sign a consent form upon

volunteering to be a part of the study. Next, the researcher conducted semi-structured interviews using the interview protocol in appendix B with ten participants via phone calls which were recorded with participants' consent. The interviews lasted approximately 30 minutes from beginning to end. Participants were informed that they could terminate the interview at any time as well as how their confidentiality was maintained throughout the study. The data collected was secured in a password protected file stored on the researcher's home computer within the researcher's home. All collected data will be destroyed after five years of completing the study.

<div align="center">**Data Analysis**</div>

Quantitative

Research question one was answered using a repeated measures mixed analysis of variance (ANOVA) with a dependent variable of scores and the independent variable participant role. Research question two was answered using a repeated measures mixed analysis of variance (ANOVA) with a dependent variable of scores and independent variable of grade level. All data was analyzed using SPSS.

Qualitative

The researcher answered research question three using grounded theory developed by Charmaz (2006). This flexible approach to data collection and analysis placed emphasis on "the views, values, beliefs, feelings, assumptions, and ideologies" of the participants (Cresswell, 2016, p.65). The interviews were recorded, transcribed, and initially analyzed using open coding. Further analysis was conducted using selective coding based on relationships within the initial codes to determine the major themes in the research. Major themes were organized and reported into categories and will be described narratively in the findings section of the study.

Qualitative Validity

For this study, the researcher conducted interviews with volunteers who participated in the Texas House Bill 3 Reading Academies during the 2021-2022 school year. The interview questions were developed by the researcher and then mentor reviewed by three committee members. Further validity was ensured by piloting the interview questions with a professional development participant outside of the sample used for this study. Further validity to this study was established through prolonged engagement and trust building with participants due to the researcher's participation in the Texas House Bill 3 Reading Academies during the 2021-2022 school year with the research participants. All interviews were recorded and then transcribed following each interview.

Privacy and Ethical Considerations

The researcher gained approval from UHCL's CPHS and the Institutional Review Board (IRB) of the participating school district prior to collecting any data. For the quantitative portion of the study, the data was provided to the researcher by the Texas House Bill 3 Reading Academy cohort leader of the sample population for the study. The researcher then loaded all data into SPSS for analysis and kept the data in a password protected file on a home computer.

For the qualitative portion of the study, the researcher provided participants with an informed consent form, located in appendix A, and explained their rights as participants in the study. The participants signed the form prior to beginning the interviews. Further measures to protect the confidentiality of the participants were taken by using pseudonyms to assist in protecting the identity of those who participated in this portion of the study. The researcher will keep all data locked in a password protected file for five years after the study. After the five year period, all data will be destroyed.

Conclusion

The purpose of this study was to determine the impact and effectiveness of the Texas House Bill 3 Reading Academies on teacher and literacy specialist knowledge and practice related to the content delivered through the professional development while highlighting educator experiences. This chapter provided a guide as to how the study was conducted. The following chapter will provide readers with the results of this study.

CHAPTER IV:

RESULTS

The purpose of this study was to investigate the impact and effectiveness of the Texas House Bill 3 Reading Academies on teacher knowledge and practice related to the content presented through the professional development while highlighting participant experiences. This chapter begins by presenting a brief description of the House Bill 3 Reading Academy district implementation, a description of the participant demographics, followed by the findings for research questions one, two, and three. This chapter will conclude with a summary of this study's findings.

Participant Demographics

Texas House Bill 3 Reading Academy participants from a small suburban school district in southeast Texas participated in this study. The participants included kindergarten teachers, first grade teachers, second grade teachers, and literacy specialists, serving in elementary school campuses who are required to complete the Texas House Bill 3 Reading Academies during the 2021-2022 school year. Of the 100 participants in the Texas HB 3 Reading Academies, 64 participated in the quantitative portion of the study as noted in Table 4.1. There were seventeen kindergarten teachers, eighteen first grade teachers, nineteen second grade teachers, and ten literacy specialists. Among the sixty-four quantitative participants, two literacy specialists, and eight teachers participated in the qualitative portion of the study.

Table 4.1
Participant demographics

Role of Participant	*%*	*N*
Kindergarten teacher	27	17
First grade teacher	28	18
Second grade teacher	30	19
Literary Specialist	15	10
Total	100	64

Research Question One and Two

Quantitative Results

Research question one, *Is there a difference in pre and posttest module scores by participant role*, and research question two, *Is there a difference in pre and posttest module scores by grade level taught*, were answered using a repeated measures mixed ANOVA to determine if there was a statistically significant difference in pre and posttest module scores and if there was a difference in scores by participant role. Table 4.2 shows the descriptives for each group on each module test.

Table 4.2
Pre and Post Test Module Scores by Participant Role

Module	Role	Pretest mean	Post test mean	Pretest SD	Post test SD	N
The science of teaching reading	Kindergarten teacher	63.53	70.59	17.66	20.15	17
	First grade teacher	66.67	76.67	21.41	20.86	18
	Second grade teacher	68.42	81.05	21.41	22.58	19
	Literacy specialist	72.00	86.00	28.59	21.19	10
Total		67.19	77.81	21.78	21.42	64
Establishing a literacy community	Kindergarten teacher	72.94	69.41	21.14	21.35	17
	First grade teacher	70.00	76.67	17.15	17.15	18
	Second grade teacher	77.89	67.37	24.85	25.13	19

	Literacy specialist	72.00	84.00	13.98	12.64	10
	Total	73.44	73.12	20.18	20.85	64
Using assessment to inform instruction	Kindergarten teacher	65.88	70.59	12.28	18.53	17
	First grade teacher	61.11	69.44	18.75	19.24	18
	Second grade teacher	61.05	67.37	16.96	16.28	19
	Literacy specialist	68.00	88.00	16.87	6.33	10
	Total	63.44	72.03	16.25	17.83	64
Oral language and vocabulary	Kindergarten teacher	52.55	57.06	19.95	21.21	17
	First grade teacher	43.33	63.89	11.84	21.64	18
	Second grade teacher	49.12	58.59	20.72	13.71	19
	Literacy specialist	59.33	59.67	18.31	21.97	10
	Total	51.41	59.84	18.00	19.25	64

Phonological awareness	Kindergarten teacher	70.0	67.65	17.68	23.06	17
	First grade teacher	75	80.00	18.87	14.14	18
	Second grade teacher	62.63	71.05	19.10	16.96	19
	Literacy specialist	83.00	86.00	20.58	10.75	10
Total		71.25	75.00	19.72	18.26	64
Pre-reading skills	Kindergarten teacher	68.82	76.47	14.53	16.18	17
	First grade teacher	73.89	80.56	15.53	16.62	18
	Second grade teacher	67.89	78.95	21.75	14.87	19
	Literacy specialist	81.00	83.00	8.76	10.59	10
Total		71.88	79.38	16.89	15.00	64
Decoding, encoding, and word study*	Kindergarten teacher	58.53	68.53	21.63	23.83	17
	First grade teacher	66.67	78.06	21.14	16.55	18
	Second grade teacher	58.16	75.53	23.22	21.14	19

	Literacy specialist	80.00	89.00	11.55	13.70	10
	Total	64.06	76.48	21.77	20.39	64
Reading fluency	Kindergarten teacher	46.47	57.65	17.29	16.41	17
	First grade teacher	51.67	60.56	16.18	13.49	18
	Second grade teacher	56.32	61.58	18.92	15.00	19
	Literacy specialist	54.00	70.00	8.43	14.91	10
	Total	52.03	61.56	16.54	15.14	64
Reading comprehension	Kindergarten teacher	61.25	71.04	22.11	18.25	17
	First grade teacher	73.52	78.70	20.59	20.68	18
	Second grade teacher	57.02	74.91	21.74	19.19	19
	Literacy specialist	81.33	79.99	20.07	12.17	10
	Total	66.67	75.82	22.69	18.37	64

Composition						
	Kindergarten teacher	62.08	72.50	17.88	17.66	17
	First grade teacher	67.71	76.71	22.37	17.68	18
	Second grade teacher	60.74	72.04	21.71	72.04	19
	Literacy specialist	81.48	79.63	13.03	15.41	10
Total		66.16	74.58	20.60	17.31	64

*Note. *indicates both time and role were statistically significant*

A repeated measures mixed ANOVA was conducted to determine if there were significant differences between time (pretest and posttest) and participant role (kindergarten teacher, first grade teacher, second grade teacher, and literacy specialist). On the subscale Decoding, encoding, and word study: there were significant differences for both time $F(1, 60) = 19.6$, $p < .01$ and role $F(3, 60) = 3.41$, $p = .02$. Figure 4.1 shows the profile plot for this test. As shown, all groups went up in score from the pretest to post test score, the time variable was significant, and it appears as though the second grade group of teachers scored higher on this test.

Figure 4.1
Profile Plot by Role
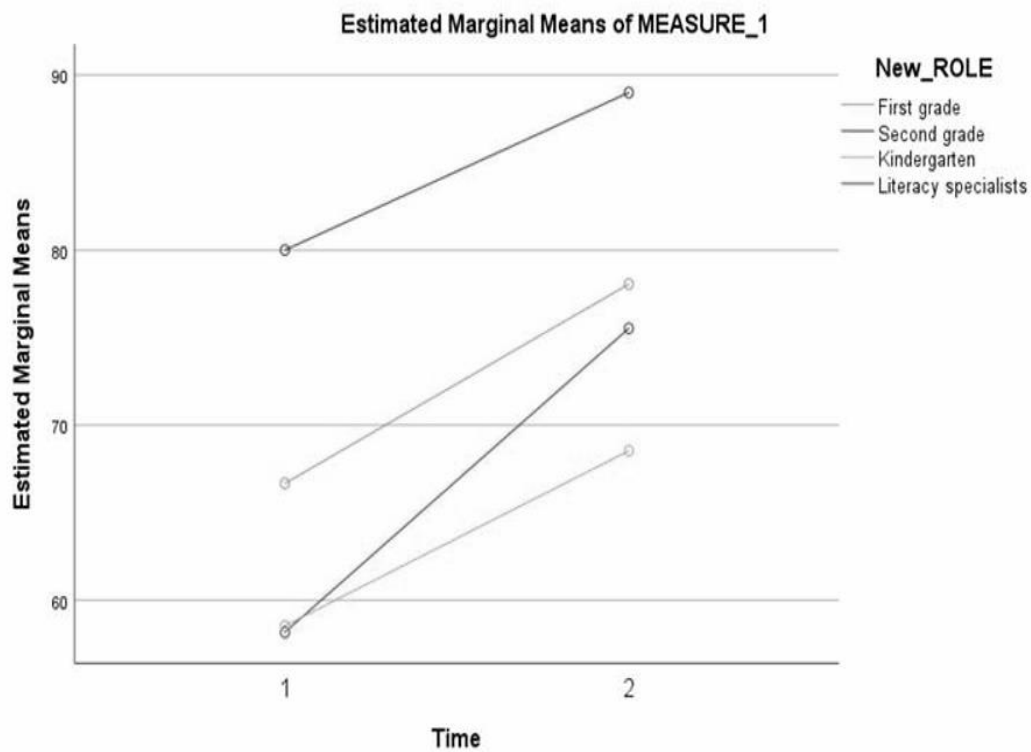
All other subscale results showed statistically significant differences for time except for the subscale establishing a literacy community. Because there were statistically significant differences between pre and posttest scores on all modules except establishing a literacy community, the results indicate that everyone who participated in the professional development seemingly grew in knowledge after completing each module. There were no statistically significant differences between roles on any of the module pre and post test scores as referenced in Table 4.3.

Table 4.3
Module F and DF by Time and Role

Module		The science of teaching reading	Establishing a literacy community	Using assessment to inform instruction	Oral language and vocabulary	Phonological awareness	Pre-reading skills	Decoding, encoding, and word study	Reading fluency	Reading comprehension	Composition
Time	F	8.32*	.728	13.64*	6.9*	1.4*	9.03*	19.6*	16.78*	9.3*	6.72*
	DF	(1,60)*	(1,60)	(1,60)*	(1,60)*	(1,60)*	(1,60)*	(1,60)*	(1,60)*	(1,59)*	(1,55)*
Role	F	1.35	.083	2.77	.328	4.57	1.32	3.41*	1.63	2.52	1.94
	DF	(3,60)	(3,60)	(3,60)	(3,60)	(3,60)	(3,60)	(3,60)*	(3,60)	(3,59)	(3,55)

Indicates statistically significant difference

Research Question Three

Qualitative Results

Interviews were conducted with ten professional development participants to answer research question three, *What can we learn about state mandated professional development from teachers and literacy specialists through their experiences with the Texas House Bill 3 Reading Academies*. The following themes emerged among the qualitative data analysis: experiences, delivery/modality, background experience, and implementation. Within the delivery theme, the following sub themes emerged: authenticity/active learning, feedback, collaboration, and time.

Background Information on the Participants

Each participant volunteered to participate in the qualitative portion of the study after solicitation from the researcher. Research participants are educators within a primary campus which serves pre-kindergarten, kindergarten, first grade, and second grade students. Participants were all female with a broad range of experience within their roles ranging from five years to 35 years of experience. The following profiles describe each participant's individual background and experience.

Participant Profile #1

"Mary"

Mary is currently an English as a Second Language (ESL) teacher who works with PK-12 students. Mary has been in her role for seventeen years. She previously taught kindergarten for seventeen years. In her current role as an ESL teacher, she works with students at different campuses in the district who require her support with language acquisition. She will work with students individually or in small groups depending on her caseload.

Participant Profile #2

"Angie"

Angie is currently an ESL teacher who works with PK-5 students. She has been an ESL teacher for seven years. She previously taught first grade and creative movement. In her current role as an ESL teacher, she works with students on one campus in the district who require her support with language acquisition. She will work with students individually, in small groups, or push into classrooms depending on her caseload.

Participant Profile #3

"Lily"

Lily is a literacy specialist who serves as an interventionist for kindergarten through second grade reading and math intervention. She uses students' formal reading and math screening data to support their instruction in small groups outside of their classroom. She previously taught first grade and second grade for a total of twelve years in the education field.

Participant Profile #4

"Emily"

Emily currently serves outside of the classroom, however, at the time of her participation in the House Bill 3 Reading Academies, she was a first-grade teacher. She has thirteen years of experience in education. She has taught first, second, and third grade throughout her time in the classroom prior to accepting her role outside of the classroom. Emily also holds an advanced degree in early childhood education. Her thesis was over phonological awareness instruction.

Participant Profile #5

"Laurel"

Laurel currently serves outside of the classroom, however, at the time of her participation in the House Bill 3 Reading Academies, she was a first-grade teacher. She has been in the education field for eight years. She previously taught first grade for seven years and second grade for one year before moving outside of the classroom. Laurel holds an advanced degree in curriculum and instruction.

Participant Profile #6

"Josie"

Josie has been in the teaching profession for five years. She has spent her career in the first-grade classroom. Prior to accepting her first teaching assignment, she spent time student teaching in kindergarten and fourth grade classrooms outside of her current school district.

Participant Profile #7

"Nora"

Nora has been in the teaching profession for twenty-five years. She has spent all twenty-five of her years as a kindergarten teacher. She has taught in three different school districts, and she holds an advanced degree in reading.

Participant Profile #8

"Silvia"

Silvia has twenty-three years of teaching experience. She has been a special education teacher for ten years, general education teacher for thirteen years. She has taught first and second grade as a self-contained or co teacher. In her time as a special education teacher, she has taught life skills, structured learning, district behavior teacher, resource/inclusion teacher, and behavior coach.

Participant Profile #9

"Suzy"

Suzy is a literacy specialist serving in the role of literacy instructional coach. She has a total of thirteen years in the education field. Within those thirteen years, she has spent five of them as a literacy coach. Outside of her time as a literacy coach, she has eight years of experience in first, second, and third grade.

Participant Profile #10

"Tara"

At the time of her participation in the House Bill 3 Reading Academies, Tara was a second-grade teacher. She has experience teaching first grade, second grade, fifth grade, and GT. She has taught for a total of thirty-five years.

Introduction to Themes

The educators who participated in this research study participated in sixty hours of self-paced online professional development. Participants began their learning in the summer of 2021 and had until the following summer to complete the professional development. Within the professional development were ten learning modules with embedded pretests, posttests, discussion boards, and reading material. Participants were required to complete all aspects of the professional development modules including the pretests, posttests, and discussion boards before they could move on to certain parts of the modules. They were required to complete the learning on their own time, but were given some time by their district towards the end of the completion timeline in the form of professional learning time. Participants had access to a cohort leader who was responsible for supporting participants throughout the duration of the professional development should they need her support, but utilizing this was voluntary. As interviews were conducted, and analyzed, themes began to emerge. The major themes were conflicting

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experiences with professional development, challenges with delivery/modality of the professional development, background experience makes a difference in professional development, and professional development implementation. Within the challenges with delivery/modality theme, the following sub themes emerged: authenticity, feedback, collaboration, and time.

Presentation of Themes

Conflicting Experiences with Professional Development

Interview participants were asked to describe their feelings surrounding the professional development prior to beginning the learning, once they began the learning, and after they completed the learning. Seven participants reported some level of negativity about the professional development throughout their time with it while three participants reported feeling positively about it.

When sharing their feelings prior to participating in the professional development, participants used words such as "daunting", "flustered", "stress", "anxious", and "resentful". Angie said, "I was a little more apprehensive and you know flustered because it was just going to be one more thing to do." Another participant, Laurel, shared, "I feel like just daunting, like it was kind of always presented as a negative if that makes sense, like oh we have to do this kind of thing from all aspects like from all parties involved instead of like a genuine learning changing experience". Conversely, participants with positive experiences shared excitement towards the learning. One participant, Lily, shared, "I was really looking forward to it, I really was excited to learn more about the science of reading so I was excited." Another participant, Emily, said "I personally, I don't feel like a whole lot of people shared in my enthusiasm for it, but I enjoyed the continuing education and learning opportunities." Upon learning about the professional development, participants' reflections demonstrate varied feelings prior to participating.

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This information implies that most participants in this study did not care to participate in the professional development before being exposed to any learning material. While there were mixed feelings prior to participating in the professional development, as educators reflected upon their feelings during the training, some feelings changed.

When responding to questions regarding their feelings once they began the professional development, most participants reported their feelings staying the same or deteriorating at some point once they began working through the online modules. Silvia, who had previously felt positively towards the professional development reported, "once I began, my feelings deteriorated honestly rather quickly, I was a participant that was making hundreds on the pretests, and I've had a lot of really quality training." Additionally, another participant shared "I was overwhelmed like Mary. It was like "oh my gosh" doing this is one thing but seeing how much it was and I was very frustrated." Of the three participants who had felt positively prior to beginning the professional development, two continued to feel positively about the professional development throughout their learning. Lily stated, "I was still excited" while Emily stated, "I overall felt like it was very beneficial and just kind of life changing in the teaching world for me." This information implies that most teachers who feel positively towards professional development continue to do so. Similarly, teachers who feel negatively about professional development continue to do so throughout the duration of the learning.

When sharing their feelings once they completed the professional development, most participants reported feeling relieved they had completed the professional development. Furthermore, some participants, Laurel, Josie, and Nora, reported feeling as though they should receive more than a certificate of completion and felt they should have received compensation for the amount of time outside of working hours to complete the professional development. Laurel stated, "we should have been able to apply it

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towards masters plus 30 or masters plus 45, I wish that was, I wish you could get like dual credit or something." Nora described her feelings as:

> For me personally, I felt like if we had some kind of compensation, um you know given the time or given a stipend or something I mean because that's a lot to ask teachers, you know 60 hours of something extra unless they choose to go to college to do that or you know working on something else, but just um you know just hearing of other districts that might have had compensation or given time or days or half days, I think that was probably the worst part of the experience is just, it was just on your own time, you've got to do it you have to have it done in a year and you're not getting compensated for it.

Another participant, Silvia, shared her feelings after the professional development was completed as:

> At the end of Reading Academies, because it was so overwhelming with the caseload I had and the lack of staff on my campus and the extra roles I was having to do and the hours I was having to do, in the end it was almost like a taking advantage of my time and my resources, so it was a relief of it being done but it became so much it had to be on my own time, um again this is a horrible thing to say, it was almost a resentment, look at all this time that I had to do that hasn't been compensated that I haven't been able to work on lesson plans or work on areas I needed to grow in to better my teaching and my students versus something that I've already had fortunately a lot of training in.

Conversely, one participant, Lily, reported her feelings as:

> After I was done with all of it I was really proud that I accomplished all of that and excited about it and really ready to implement a lot of the things that I learned, there was some things that I like knew but some things it just took it a

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little bit deeper, and I was really looking forward to trying out a lot of the things

that I learned about so I was excited about it.

This sentiment was echoed by another participant, Emily, who felt "grateful" for a new perspective of teaching reading and was eager to implement her new learning in the classroom.

Overall, participants felt more negatively towards the professional development than positively. Furthermore, participants' feelings did not change throughout their time with the professional development. Although there was more negativity towards this professional development from participants, the positive experiences cannot go unnoticed. This information suggests that professional development participants who feel positively about professional development learning opportunities continue to do so throughout their learning. Additionally, among those participants who felt positively throughout the duration of the professional development are eager to implement their learning within their roles.

Challenges with Delivery/Modality of Professional Development

The state mandated professional development was delivered through an online self-paced course. The population sample was given deadlines to complete certain modules by their cohort leader in an effort to support everyone's timely completion of the professional development. There were various areas the participants felt were challenging about the delivery method and modality of the professional development.

Three participants, Tara, Mary, and Angie felt that "teachers do not learn well online" and "teachers need face to face interaction with other teachers." Another participant, Silvia, commented "the delivery did absolutely nothing for me," When describing learning within the modules Angie shared:

For me it was sometimes you just had to click on something different just to read

something, so it took me longer just to read it which I think it was something they

were thinking was engaging and they were using different modes and it's not a

different mode, I'm still reading it on a screen. I just had to click somewhere first

so while I appreciate their efforts it didn't really feel that different to me.

Authenticity/Active learning. There were several participants who felt the

delivery method of the professional development lacked authentic or active learning. For

example, Angie described her experience submitting an artifact of her learning which

required her to record herself presenting a short lesson by stating:

Finding a quiet time by myself to record it was bad enough and then I think the

requirements they had were kind of ridiculous. You had to actually pretend that

someone made a mistake. I remember one of mine was it's like I corrected the kid

but I didn't offer, it was this world like I don't know what world this is. It was

you know again it was just like I was trying to check all the boxes on that thing on

the rubric for that even though it was so awkward and not what you would really,

I mean, yeah contrived. It's so hard to be natural in a video where you're staring

at yourself and not a group of children. I think a lot of us would have done a

whole lot better if you put us in front of kids.

Furthermore, one particular aspect of the professional development participants

felt a lack of authenticity or active learning with the delivery was the embedded

discussion boards. Participants were required to write in discussion boards throughout the

professional development before they could move on to other sections of the learning

material. One participant, Laurel, described her feelings about the discussion boards as

being "tedious" and felt like she was back in a college class when she was trying to get

points for completing the discussions instead of having meaningful conversations with

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other participants. This sentiment was echoed by another participant, Josie who stated "The least beneficial was probably the mandatory discussion, like I don't need to discuss it with people I don't know. Just let me get through it and learn what I need to learn. That took a lot of time to be honest." Later on in the interview she said:

> It felt like I was in college or high school and they hid the other people's discussion until you submitted yours so like you said that's not, like I want to hear other people's ideas, I don't want to copy them word for word, I want to learn from them, why do we have to hide the other people's discussions. It felt shady, I was like we're professionals, we are professional teachers and you're hiding everyone else's discussion. I just didn't like it, it gave me icky, it made me feel weird.

Another participant, Lily, who had an overall positive experience with the professional development described the discussion board postings as:

> There were so many responses, so I think after a while you're just repeating yourself a lot or not putting as much effort into responding so quickly, um I really didn't mind reading through the different things or taking the different quizzes to be sure I understood what I had just read. There was a lot of written, especially towards the end there was a lot of written so I don't think you know after a while I just probably wasn't giving my best effort on that because you were doing so many over and over, I felt like I might have been just saying the same thing, the amount of responses was sort of not my favorite part.

These responses indicate that the professional development involved aspects that did not benefit participants as a whole due to the lack of authentic or active learning. This included the discussion board postings and for some participants, the artifact submissions.

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Feedback. Another shortcoming of the professional development was the lack of feedback throughout the learning experience. Participants were required to submit two artifacts of their learning which were evaluated using a rubric and then returned to the participants with their score. Mary shared:

> You got your grade from someone you didn't know and there is no notes with the grade. I got a 90, I don't know why I got a 90. I mean where'd I lose 10 points? And so I mean that was, when you don't get you know immediate specific feedback just like we do with our kids. So that to me was the biggest time expenditure for the least value that I feel like all I did was I did it because I had to but I didn't learn anything from it because one of them I got a 100 but the other one I got a 90, I don't know how I lost 10 points and you know that would be helpful to know.

Participants were also required to take a pretest before beginning the professional development modules and then pass the posttest before moving on to the next module. Angie shared her experience with the module pre and posttests as:

> Speaking of those tests on that thing, you know it was really frustrating, there was one, it was something I didn't know, it was a subject I really didn't know, I can't remember what it was because I didn't feel like it was that important, I mean clearly, yeah it's not something I use, anyway I like I feel like I got one question wrong and I had to retake it, I got like no feedback and I had no idea why it was right or wrong and when I got it wrong I had to go, I literally, the first time I chose A, that was wrong, the second time I chose B, that was wrong, the third time I chose C, I was literally just guessing, I had no idea. After that I had no idea, so I failed this test three times and now I made 100, and it's only because I could retake it and I got no feedback, I even went back in that module and I tried to read

and find it and I couldn't, I'm sure it was there, I know I wasn't spending as much time because I was already frustrated with the time I was giving. I remember going back and being like oh my gosh how did I miss this, but I left going okay now I still don't know it.

Conversely, Mary did mention that she utilized her cohort leader to support her artifact development. She said the feedback from her cohort leader on her draft artifact was helpful, but she wanted further feedback on her final submission score which her cohort leader could not provide her with. It is clear that Angie did not view the grade given to her on her posttest as a form of feedback. This information indicates that participants desire professional development to involve feedback to support their learning and growth.

Collaboration. Participants expressed a desire to collaborate with their peers throughout their learning experience. Because the professional development was delivered online and was self-paced, this hindered their ability to successfully collaborate with other teachers who were learning the same material at different times depending on where they were in the online modules. One participant, Emily, explained "I think that going through a few modules and then debriefing and kind of like seeing how you're applying it in your classroom. It would have been super beneficial to hear others." Another participant, Laurel, expressed something that could have improved her overall experience with the professional development was, "opportunities to work with colleagues and peers would allow you to engage with the material more." Lily, a literacy specialist, shared:

My principal and other specialists were looking forward to opportunities to come together as a campus and have PL around what we had learned and looking forward to really all of us together sharing the learning and you know since we had done the

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modules where you do it on your own, we never had the times to you know all share what we were learning together. She goes on to say:

> We never had any opportunities to discuss anything, I think if it was prioritized and there were times when we all were together and we were meeting and discussing um talking about how we could implement things right then and there you know, um I think it all would have been taken much more seriously and people would have seen the value if they could have started right away in their classrooms things that they were learning in real time it would have been a different altogether experience.

While overall participants expressed a desire to collaborate, some participants did, however, collaborate with their peers. One participant, Tara, described how her and another teacher on her grade level team would discuss ways to implement what they had learned in their classrooms. Suzy, a literacy specialist, described collaborating with other literacy specialists about how to include some of the learning in the district curriculum. Lastly, Nora, described the campus level collaboration with literacy specialists:

> Sometimes I learned more about the course through the coaches that live it and are the reading specialist that they deal with those struggling students every day and so you know they're very knowledgeable in that so they were able to bring it back to us and talk about different modules and stuff but had that not happened, I can honestly say I don't know what I would have taken away from it.

This information indicates that there was not an overall uniform level of collaboration throughout the professional development. The collaboration that did happen was either self-initiated and informal, or happened on an as needed basis. Participants who did collaborate seemed to benefit from the collaboration and those who did not collaborate wish they had more opportunities to collaborate.

Time. One area that all participants felt was challenging about the professional development was the time it took to complete it and the lack of time their district gave them to work on it during work hours. Participants explained the professional development took them more than the 60 hours the state had said the professional development would take. One participant, Nora, shared:

It definitely took longer than the 60 hours. I started thinking if I was approaching it like I did the first three or four modules, I'm thinking oh my gosh I probably already spend 25 hours just on these four taking the notes and writing the notes in a different place and really trying to read everything they were giving us this was way more than 60 hours.

Mary also shared:

Once I started I noticed just with the first section it took me probably three more hours than what they estimated the time it was going to take. I took way longer than their estimated time so I already started calculating what they estimated was going to be 60 hours, I knew it was going to be a whole lot more.

Some participants shared that once they realized how time consuming the professional development would be, they stopped reading as carefully and began clicking through pages of learning to complete the learning quicker. Nora shared:

Well I kind of realized along the way I was probably spending way too much time on different modules. I was like I've got to speed this up and so um I found myself sadly not really reading the handouts and not really diving into what they were trying to teach and just trying to get through it.

She went on later in the interview by stating:

I think a lot of teachers just started clicking screens by the end and you know if their goal was to really teach and then you know I don't think that happened, I

think it was just click the screen take the test over and over until you get it right, you know sad to say people were reading other people's answers and tweaking them, you know at that point just trying to get through it when you realize it is taking double the time they said.

Suzy, a literacy specialist, provides insight into how the time it took to complete affected participants' learning "What I think really happened is the way that it, which I hate to keep saying it, the time piece, but like I think for a lot of people like I said it became a clicking game." Mary believes, "a lot of people would have changed their attitude about it had it not been so time consuming."

While participants mostly mentioned how time consuming the professional development was to complete on top of their regular job duties, they also expressed frustration with the lack of time their district gave them to complete the professional development. Angie expressed, "that's another thing that didn't sit well with teachers here was you were expected to do it almost 100% on your own time and it wasn't until we fussed until they gave us time here." Silvia shared, "I was in a district that didn't provide a whole lot of time or compensation to teachers to get it done." Mary echoed this sentiment by stating, "we never really had you know a lot of time given to us. That's unrealistic to think that people have that much spare time." Emily stated, "there was no set time, no special PD days, it was just get it done on your own."

This information suggests that educators in this study would have had a different learning experience had the professional development either not been so time consuming or if they would have been given more time by their district to complete the professional development. It appears that the amount of time it took to complete the professional development impacted their learning, collaboration, and implementation of the content learned through the professional development. Even though participants in this study

expressed frustrations with the delivery/modality of the professional development, all participants were able to implement some of the material they learned within their classrooms.

Background Experience Makes a Difference in Professional Development

One area the professional development participants felt the professional development did not consider was participants' prior experience with the content presented through the professional development. There were participants who felt they had adequate training on the topics presented through the professional development therefore, they did not feel the professional development was relevant to them at all. One participant, Silvia, shared she had been trained through Reading By Design, a dyslexia program offered within the state. Furthermore, she was making perfect scores on pretests, so she did not feel the professional development was a good use of her time. Another participant, Mary, echoed this sentiment by stating:

I honestly felt like it was like a very long drawn out version of all the training I've ever had kind of put together and had you know I understand you know third grade teachers and teachers that hadn't taught you know beginning early literacy you know maybe got a lot out of it but to me it was just kind of like exhausting because it was really drawn out without achieving a whole lot of new goals for me.

Nora, who holds an advanced degree expressed, "I had gotten my masters in early childhood, so my research project was around phonological awareness and how that enhances their reading and writing so I felt like it reiterated a lot of that."

Among the group of participants who felt they had background experience with the content presented in the professional development, they all expressed that the professional development validated their current teaching practices. Although they

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expressed prior experience with the content, they all learned something they did not know prior to participating in the professional development and were able to implement their learning.

This information indicates that some professional development participants may not have benefitted from some of the learning modules based on previous training or experience with the content presented. Furthermore, it also indicates that professional development should consider what participants already know in order to better meet their needs. Despite the fact that the professional development did consider participants' prior experiences with the content presented, participants were still able to implement their learning within their role in one way or another.

Professional Development Implementation

Participants were asked if they implemented anything they learned throughout the professional development. Almost all teachers expressed that their teaching changed after completing the professional development. Specifically, teachers expressed how their phonological awareness, phonemic awareness, and phonics instruction had changed or they had more resources as a result of the professional development. Josie described her implementation:

> Basically be like more intentional with my phonemic awareness and how I teach it, be more intentional in my delivery of it, um kind of like I got a more better sense of why if a student is doing something, maybe why they are doing it, it did teach me a lot about my teaching and what I was doing in the past and what I could change, I would definitely say phonemic awareness got stronger in my classroom.

Teachers were able to better personalize instruction for their students in small groups as described by Tara:

It became way more personalized than the blanket here's my phonics lesson for

the day, it became very personal within my small groups and it did make me focus

more on you know I've got a high level P reader but if I take those words in

isolation, he can't read those words, what am I going to do with that, and really

diving into where is that kiddo's break down, I can figure out my low babies, I

know where there breakdown is, the high kids mask it so that was my goal this

year, was to figure out the high kids, where are there deficits because they're so

used to not having deficits because they read so well so that's really what I

implemented in my classroom this year.

While teachers were able to implement changes in their classrooms as a result of

the professional development, literacy specialist implementation looked different.

Literacy specialists agreed that the content learned was what they were already

implementing within their role, however, the content gave them a greater understanding

of early literacy skill development. Both literacy specialists explained how beneficial it

was to be able to go back into the online platform and refer to the learning and resources

it offered. Suzy describes:

I have gone back quite a bit because we have at the district level the teaching and

learning department we had to use some of it to revamp some of our curriculum

and so it was useful in that way to go back and kind of see some of the research

behind the order of some of the instructing of letters and how it supposed to be

with handwriting some smaller pieces like that yes, we have gone back to revisit.

While Lily explains:

I mean I know um like I said a lot of the things we were doing just on a different

scale, I mean we have actually referred back many times to the modules, I know

[the cohort leader] has stuff on the computer so we've downloaded many things

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and gone back and looked up lots of things and if we were using it to explain something to a teacher if a teacher had a question we'd always go back to the definitions, to the reading academies to explain it. I referred back to it many many times.

This data indicates that all participants were able to utilize some of what they had learned in the professional development within their role. Teachers were able to implement varying aspects of their learning after completing the professional development, or as they were working through the professional development. Literacy Specialists were able to apply their learning at the district level, or within their small group instruction. Additionally, it indicates there may be some benefit to professional development participants in having the ability to refer back to learning material, especially when there is a large amount of information such as with the Reading Academies.

Summary of Findings

The purpose of this study was to examine the impact and effectiveness of state mandated professional development. The study included 64 participants in the quantitative portion of the study. Seventeen were kindergarten teachers, eighteen were first grade teachers, nineteen were second grade teachers, and ten were literacy specialists. The qualitative portion of the study included ten participants. Two of the participants were literacy specialists, and eight were teachers.

The quantitative portion of the study revealed that there were statistically significant differences for all module pre and posttests except for the establishing a literacy community module. The decoding, encoding, and word study module showed statistically significant differences for both time and by role. Overall, this data indicates

that the professional development, according to pre and posttest scores, benefited all participants.

The findings for the qualitative portion of the study are based on the experiences of ten professional development participants. The following themes emerged from the data analysis: experiences, delivery/modality, background experience, and implementation. Sub themes emerged among the delivery/modality theme which include authenticity/active learning, feedback, collaboration, and time. Overall, many participants, mostly teachers, shared negative experiences with the professional development. They felt the delivery/modality of the professional development was not conducive to learning and may have hindered their learning. They also felt the amount of time the professional development took to complete aided in their negative experience with the professional development. Regardless of the shortcomings shared by the participants, most of the participants were able to implement some of their learning within their role.

Conclusion

This chapter presented the analysis of the quantitative and qualitative data collected from pre and posttest module scores, and interview participants. The following chapter will present comparisons between this research and existing research. Implications and suggestions for future research will also be presented.

CHAPTER V:

SUMMARY, IMPLICATION, AND RECOMMENDATIONS

Statewide professional development mandates, such as the Texas House Bill 3 Reading Academies continue to be used as a tool to improve teacher knowledge and practice related to certain content areas as seen in the history of Texas' statewide professional development mandates. In the case of the Texas House Bill 3 Reading Academies, the state passed this requirement ultimately to improve student literacy outcomes by improving teacher knowledge and use of evidence based practices (Texas Education Agency, 2022). This study sought to examine the impact and efficacy of state mandated professional development on teacher knowledge and practice while highlighting participant experiences with the professional development.

Discussion

The results of this study reveal that the Texas House Bill 3 Reading Academies professional development did have an impact on teacher knowledge and practice, however, the professional development itself was ineffective according to most participant experiences. Despite this, there were certain aspects of the professional development that teachers were able to implement which indicates this professional development benefited all participants in some way and it did have an impact on practice. The results of the quantitative portion of the study shows that there were statistically significant differences in participant knowledge on the pre and posttest scores for all modules except the establishing a literacy community module. This means that the participants' knowledge seemingly grew throughout the majority of the professional development. The qualitative portion of the study revealed four major themes which were conflicting experiences with professional development, challenges with delivery/modality of professional development, background experience makes a difference in professional

development, and professional development implementation. Within the challenges with delivery/modality of professional development theme, subthemes emerged which were authenticity/active learning, feedback, collaboration, and time. These themes and subthemes reveal participant experiences, the effectiveness of the professional development, and its impact on practice.

The quantitative findings in this study indicate that teacher knowledge grew as a result of the mandated professional development. These findings are consistent with previous research that argues that professional development improves teacher knowledge of literacy (Podjajski et al., 2009; Folsom et al., 2017). Because professional development can impact teacher knowledge of literacy, it is important to understand areas in which teachers need to improve their knowledge. The state of Texas decided that teachers in the state lack knowledge in the area of literacy, so the state mandated professional development to improve it. Although the results show statistically significant increases in knowledge over time, it is important to note that the pre and posttest validity and reliability was not determined at the time of this study. Another aspect of the pre and posttests worth noting is the participants were granted unlimited attempts at obtaining a passing score of 80 or higher on the posttests. It is unclear as to which attempt was recorded and given to the researcher for analysis. As a result, the results of the quantitative portion of the study should be interpreted with caution.

The qualitative portion of the study sought to learn about state mandated professional development from the experiences of teachers and literacy specialists. Overall, most of the participants viewed the professional development as a negative experience and continued to view it negatively throughout the duration of their learning. This finding aligns with research conducted by Smith & Robinson (2020) in which participants viewed forced compliance as a negative aspect of professional development.

Conversely, this finding contradicts research conducted by Smith & Williams (2020) in which participants had positive perceptions about their professional development experience which involved a Professional Learning Communities format of professional development delivery as well as several factors of effective professional development including collaboration, feedback and reflection, and sustained duration. The duration of the Texas House Bill 3 Reading Academies was beyond the minimum recommendation of 14 hours according to Yoon et al. (2017) whereas the Smith & Williams (2020) involved only 16 contact hours over the five-month duration of the professional development. The difference in professional development delivery and effective professional development factors may contribute to the contradiction.

Through participant experiences, the results of this study further indicate that this statewide mandated professional development was ineffective for some participants. Effective professional development includes seven shared features: content focused, active learning, coaching, expert support, and collaboration, modeling effective practice, feedback and reflection, and sustained duration (Darling-Hammond et al., 2017; Desimone, 2009; Richardson, 2003; Birman et.al., 2000). Although the professional development involved some features of effective professional development such as content focused learning modules and sustained duration, the areas it lacked made a negative difference in participants' experiences. While this professional development may have been ineffective for the majority of participants, two participants found value in the professional development and shared their positive experiences and enthusiasm to implement their learning. This finding is consistent with Smith & Robinson (2020), in which professional development participants felt positively toward their experience with professional development.

The modality of the professional development may have contributed to the lack of effectiveness. Among the features of effective professional development as noted by, Darling-Hammond et al. (2017); Desimone (2009); Richardson (2003); and Birman et.al. (2000), active learning, collaboration, and feedback emerged as sub themes in which participants felt the professional development lacked. Active learning should involve hands-on learning opportunities and be connected to participants' classroom and students. Based on the participants' responses, this state mandated professional development did not involve that feature. Though participants did mention they collaborated with peers, the collaboration was self-initiated or on an as needed basis at the district level. Most participants wished there had been more formal opportunities to collaborate with peers on a larger scale so they could learn from others about how to implement their learning in their classrooms. Additionally, feedback, although present, was something participants felt was lacking within the professional development. According to Darling Hammond et al. (2017), "professional development models associated with gains in student learning frequently provide build-in time for teachers to think about, receive input on, and make changes to their practice by providing intentional time for feedback and/or reflection" (p.14). Feedback as described by Darling Hammond et al. (2017), was not the type of feedback described by participants.

The Texas House Bill 3 Reading Academies was designed to be 60 hours worth of professional development. The minimum recommendation for professional development duration is 14 hours (Yoon et al. 2007). This state mandated professional development far exceeded the minimum recommendation as expressed in participants' responses to interview questions. Additionally, participants strongly believed the time it took to complete it hindered their learning in some way or another. Furthermore, they were

required to complete the online modules, for the most part, during personal time which added to the negative feelings towards the professional development.

Although there were several shortcomings of the professional development, participants did mention ways they implemented their learning in their roles which indicates that this professional development did have an impact on participants' practice. For teachers, this was a change or improvement in instruction within phonological awareness, phonemic awareness, and phonics. For literacy specialists, this looked like a deeper understanding of early literacy instruction and district level implementation within curriculum writing. This is consistent with research conducted by Perkins and Cooter (2013), Parsons et.al. (2019), and Cunningham et al., (2015) in which the presence of content learned through the professional development emerged in classroom observational data. It is important, however, to note that the Texas House Bill 3 Reading Academies involved a multitude of aspects regarding early literacy instruction and the areas participants mentioned they implemented were minimal compared to the amount of information provided in the professional development. This indicates that participants were already implementing a large majority of the content prior to attending the professional development or the lack of effective professional development characteristics hindered their learning. Regardless of this, the professional development did have some level of impact or benefit for all participants.

The Texas House Bill 3 Reading Academies shares some commonalities with historical state mandated professional development such as the Texas Reading Initiative and the Texas Adolescent Literacy Academies. Similar to Stewart (2003), Boatman (2003), Gibson (2005), and Hawk et.al. (2011), the findings in this research reveal that professional development can have some impact on classroom practice due to participant implementation of content presented in professional development. Aside from delivering

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similar content and mandatory attendance, all professional development initiatives sought to improve teacher knowledge and implementation of evidence-based strategies to improve student outcomes (Denton, 1997; Boatman, 2003; Texas Education Agency, 2022). If these professional development mandates worked the way they were intended, Texas would not have to continue mandating professional development to improve student outcomes.

Based on the results of the study, the conclusion can be made that the Texas House Bill 3 Reading Academies were not an effective form of professional development although it did have some impact on teacher knowledge and classroom practice. This may have been due to the delivery or modality of the professional development. As mentioned by participants, "teachers don't learn well online" and "teachers need face to face interaction with other teachers." Another factor that could have prevented greater impact on classroom practice was due to the lack of effective professional development factors present within the design of the professional development. It is important for those responsible for designing or providing professional development opportunities to ensure that professional development opportunities are aligned to research to have the greatest impact on participants and ultimately students.

Connection to Theoretical Framework

The theoretical framework for this research was Adult Learning Theory. When conducting research on professional development, which involves adult learners, it is important to view the research through an adult learning lens. One foundation of Adult Learning Theory is adults' experiences. According to participants' experiences as described in the qualitative findings, this professional development did not consider participants' background experiences with the content presented within the professional

development. This could have been a reason why the professional development was not effective for some of the participants.

Another reason this professional development was ineffective for some participants could be due to it not being designed for adult learners. There are specific learning conditions required for adult learners according to Knowles' adult learning theory. For example, according to Knowles (1970), learners seek out learning opportunities based on personal needs. Participants' were mandated to attend this professional development which means they did not necessarily seek out this learning opportunity. Additionally, Knowles (1984) asserts that adult learners must be provided with a learning environment in which there is "mutual trust and respect" (p.85-87). Participants did not feel respected as professionals due to certain aspects of this professional development such as the required discussion board postings and the inability to view incorrect responses on module posttests. This indicates that state mandated professional development similar to the Texas House Bill 3 Reading Academies is not designed for adult learners.

Although Adult Learning Theory could be used to describe why the professional development was ineffective for some participants it could also be used to explain why it was effective for some participants. Two participants, Emily and Lily, expressed their enthusiasm towards the professional development and appreciated the opportunity to learn more about the content presented through the professional development. These participants expressed positivity towards the professional development throughout the duration of their learning. According to Knowles, as "adult learners' self-concept moves from being dependent to self directed, their experiences become resources for learning, their readiness to learn is related to developmental tasks and social roles, and their time perspective changes to immediate application" (Knowles, 1970, p. 44-45). These two

participants expressed their enthusiasm towards applying their learning within their roles. While some data from this study reveal this professional development was not designed for some adult learners, it appears as though some adult learners did very well with this professional development.

Research Design Limitations

There are several factors which pose limitations to the study. The sample size could be too small to generalize to the population. There are several thousand teachers, literacy specialists, and administrators in the state of Texas who were required to undergo the House Bill 3 Reading Academies and the sample size was 64 quantitative participants and 10 qualitative participants.

Another limitation of this study might be the lack of generalizability due to varying implementation models. The participants in this study participated in a blended model which was implemented locally for the House Bill 3 Reading Academies. In contrast, other districts in the state might have chosen another form of implementation such as a face to face learning model. All of the content being delivered to those required to attend the House Bill 3 Reading Academies, was the same however, the deliver/modality of the content varied from district to district.

An additional limitation to the study design is the pre and post module tests. The validity and reliability was not able to be determined at the time of the study. Furthermore, the pre and posttest module tests allowed multiple attempts to achieve a passing score. It is unclear as to which score was recorded and given to the researcher prior to analysis.

A final limitation of this study could be the lack of generalizability due to the change in program content following year one and two implementation. During the duration of the 2020-2021 and 2021-2022 implementation years, the state collected

ongoing feedback from participants. Because of the feedback they received, the state took measures to improve the program for year three implementation. Though the content will not change, measures were taken to change the program thus posing a threat to generalizability.

<div align="center">**Implications**</div>

Based on the summary of findings discussed in the previous section, implications exist for campus leaders, district leaders, and state leaders. The findings of this study could support organizations in providing teachers with professional development that is effective and tailored to their needs. If policy makers are going to continue to mandate professional development and deliver professional development statewide, they must do it differently than has been done in the past.

Implications for Campus and District Leaders

Campus and district leaders are responsible for determining the needs of their campus or district based on a variety of factors, one of which is student data. Typically, when student data shows weaknesses in certain areas, campus and district leaders require teachers to attend professional development in that area. When requiring teachers to attend professional development, campus and district leaders must ensure that professional development opportunities involve the effective professional development factors outlined within this study. Otherwise, the professional development may not achieve its intended goals.

Beyond ensuring the presence of professional development factors, campus and district leaders may consider surveying teachers to determine existing knowledge or interest prior to requiring professional development on certain topics. As previously mentioned, adult learners learn under certain conditions and their experiences are important. Although this may not matter in the event of another state mandated

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professional development initiative, it could make a difference during normal professional development circumstances. In an effort to ensure professional development participants find value in learning opportunities, it is important to consider teacher experiences.

Lastly, campus and district leaders may reconsider how they implement professional development. Although professional development is required, no such requirements exist, to the researcher's knowledge, in which all teachers must receive the exact same professional development that their peers receive. Campus and district leaders may consider a more personalized professional development approach in which teachers' voices and needs are elevated beyond what campus and district leaders assume they need. In this scenario, teachers will be empowered to determine their own areas of weakness and receive a personalized experience with their professional learning.

Implications for State Leaders

State leaders are responsible for public education mandates within their state. As a result, and as seen in the history of Texas education, the legislators have the power and authority to mandate professional development for teachers. The findings of this study reveal that there was an impact on knowledge, according to the embedded pre and posttests and it had some impact on classroom practice. However, the professional development was largely ineffective for some participants due to the lack of effective professional development factors present within the professional development. It is imperative that state leaders evaluate mandated professional development for effectiveness to ultimately increase its impact for teachers and students.

Additionally, there is a need to evaluate participants' existing knowledge prior to mandating a one size fits all type of professional development statewide. Based on the findings, participant implementation of content learned was minimal for a variety of

potential reasons such as implementation of content prior to receiving professional development, or participants did not find the material useful. Because of this, it is important for state leaders to consider educator's varied experiences with content prior to mandating professional development. In an effort to ensure professional development adds value for all educators, state leaders should consider individuals' needs and experiences.

Recommendations for Future Research

There are several recommendations for future research in this area. Researchers should consider choosing a larger sample size. By increasing the sample size, researchers will be able to better generalize the results of this study. Additionally, researchers should use a valid and reliable knowledge assessment used in previous research. By utilizing a valid and reliable assessment researchers would be able to better compare the findings of their study to past research in this area. Researchers should also consider collecting qualitative data from participants while they are involved in the professional development. This will allow the researcher to gain more in the moment data versus requiring participants to reflect on the professional development the year after they have completed it.

In this study, interviews were conducted with all participants. For future research, it is recommended that researchers conduct multiple interviews with participants. These interviews should look at determining what aspect of professional development are most beneficial to participants. This would give greater insight into what teachers desire out of professional development opportunities to allow a greater impact.

Conclusion

The purpose of this study was to investigate the impact and effectiveness of state mandated literacy professional development on teacher knowledge and practice while highlighting the experiences of participants. The study found that the professional development did have an impact on teacher knowledge based on embedded pre and posttests and some impact on practice, however, the professional development was ineffective for some participants based on qualitative findings. This chapter presented the summary, implications, and recommendations for future research.

REFERENCES

Al-Hazza, T., Fleener, C., & Hager, J. (2008). Primary teachers' knowledge and

knowledge calibration of early literacy practices. *Teaching & Learning Faculty*

Publications, 8(1), 1-11.

Birman, B.F., Desimone, L., Porter, A.C., Garet, M.S. (2000). Designing professional

development that works. *Educational Leadership,* 57(8), 28-33.

https://files.ascd.org/staticfiles/ascd/pdf/journals/ed_lead/el200005_birman.pdf

Boatman, V. (2003). *An investigation into the effects of long-term staff development on*

teacher perceptions and reading achievement of young children. [Doctoral

dissertation, University of North Texas].

Carlisle, J.F., Kelcey, B., Rowan, B., & Phelps, G. (2011). Teachers' knowledge about

early reading: Effects on students' gains in reading achievement. *Journal of*

Research on Educational Effectiveness, 4, 289-321. DOI:

10.1080/19345747..2010.539297

Charmaz, K. (2006) *Constructing grounded theory: A practical guide through qualitative*

analysis. Sage Publications.

Cresswell, J.W., (2016). Five qualitative approaches to inquiry. 53-84

Crim, C., Hawkins, J., Thornton, J., Rosof, H.B., Copley, J., & Thomas, E. (2008). Early

childhood Educators' knowledge of early literacy development. *Issues in Teacher*

Education, 17(1), 17-30. https://files.eric.ed.gov/fulltext/EJ816593.pdf

Cunningham, A.E., Etter, K., Platas, L., Wheeler, L., & Campbell, K. (2015).

Professional development in emergent literacy: A design experiment of teacher

study groups. *Early Childhood Research Quarterly,* 31(2), 62-77.

https://doi.org/10.1016/j.ecresq.2014.12.002

Cunningham, A.E., Perry, K.E., Stanovich, K.E., & Stanovich P.J. (2004). Disciplinary

knowledge of k-3 teachers and their knowledge calibration in the domain of early

literacy. *Journals of Dyslexia*, 54(1).

Cunningham, A.E., Zibulsky, J., & Callahan, M.D. (2009). Starting small: Building

preschool teacher knowledge that supports early literacy development. *Read Writ*,

22, 487-510. DOI 10.1007/s11145-009-9164-z

Darling-Hammond. L., Hyler. M. E., Gardner. M., & Espinoza, D. (2017). Effective

teacher professional development. *Learning Policy Institute*.

https://bibliotecadigital.mineduc.cl/bitstream/handle/20.500.12365/17357/46%20

Effective_Teacher_Professional_Development_REPORT.pdf?sequence=1

Denton, D. (1997). The texas reading initiative: mobilizing resources for literacy. *Paths*

to Success School Readiness for Children and Schools- Birth to Grade 3, 2, 3-10.

https://files.eric.ed.gov/fulltext/ED432747.pdf

Desimone, L. M. (2009). Improving impact studies of teachers' professional

development: Toward better conceptualizations and measures. *Educational*

Researcher, 38(3). https://doi.org/10.3102/0013189X08331140

Ehri, L. C., & Flugman, B. (2017). Mentoring teachers in systematic phonics instruction:

Effectiveness of an intensive year-long program for kindergarten through 3rd

grade teachers and their students. *Reading and Writing: An Interdisciplinary*

Journal, 34(2), 425-456. https://doi.org/10.1007/s11145-017-9792-7

Every Student Succeeds Act. (2015). S. 1177, Section 8002, page 295, paragraph 42.

https://www.ed.gov/essa?src=rn

Folsom, J. S., Smith, K. G., Burk, K., & Oakley, N. (2017). Educator outcomes

associated with implementation of Mississippi's k-3 early literacy professional

development initiative. *Making Connections.*

https://ies.ed.gov/ncee/edlabs/regions/southeast/pdf/REL_2017270.pdf

Gallagher H.A., Arshan, N., & Woodworth, K. (2017) Impact of the national writing

project's college-ready writers program in high-need rural districts, *Journal of*

Research on Educational Effectiveness, 10(3), 570-595. DOI:

10.1080/19345747.2017.1300361

Garet, M.S., Porter, A.C., Desimone, L., Birman, B.F., & Yoon, K.S. (2001). What

makes professional development effective? Results from a national sample of

teachers. *American Educational Research*, 38(4), 915-945.

https://www.jstor.org/stable/3203507

Gibson Consulting Group. (2004). *Evaluation of student success initiative teacher*

training academies.

Greenleaf, C. L., Hanson, T. L., Rosen, R., Boscardin, D. K., Herman, J., Schneider, S.

A., Madden, S., & Jones, B. (2011). Integrating literacy and science in biology:

Teaching and learning impacts of reading apprenticeship professional

development. *American Educational Research Journal*, 48(3), 647–717.

Guskey, T. R. & Yoon, K.S. (2009). What works in professional development? *Phi Delta*

Kappan, 90(7), 485-536. https://doi.org/10.1177/003172170909000709

Hawk, C. K., Horwood, T., O'Conner, R., Basta, K., & Vas, J. (2011). *Evaluation of the*

texas adolescent literacy academies (TALA): Case study report. Fairfax, VA: ICF

International.

Hudson, A.K. (2022). Upper elementary teachers; knowledge of reading comprehension,

classroom practice, and student's performance is reading comprehension. *Reading*

Research Quarterly, 0 (0), 1-10. DOI:10.1002/rrq.491d

International Literacy Association. https://www.literacyworldwide.org/get-

resources/literacy-glossary

Joshi, R.M., Binks, E., Hougen, M., Dahlgren, M.E., Ocker-Dean, E., & Smith, D.L.

(2009). Why elementary teachers might be inadequately prepared to teach

reading. *Journal of Learning Disabilities*, 42(5), 387-480.

https://doi.org/10.1177/0022219409338736

Kennedy, M. M. (2016). How does professional development improve teaching? *Review*

of *Educational Research*, 86 (4), 945-980.

https://doi.org/10.3102/0034654315626800

Knowles, M.S. (1970). *The modern practice of adult education: Andragogy versus pedagogy*. Association Press.

Knowles, M.S. (1984). *The adult learner: A neglected species.* Gulf.

Landry, S. H., Anthony, J. L., Swank, P. R., & Monseque-Bailey, P. (2009). Effectiveness of comprehensive professional development for teachers of at-risk preschoolers. *Journal of Educational Psychology*, 101(2), 448–465.

Learning Forward. (2008). Definition of professional development. Retrieved from http://learningforward.org/who-we-are/professional-learningdefinition#DefinitionResources

Little J.W & Richardson-Koehler V. (1987) Teachers as colleagues. *Educators' handbook: A research perspective*. New York Longman, 491-518.

McCutchen, D., Abbott, R., Green, L.B., Beretvas, N., Cox, S., Potter, N.S., Quiroga, T., & Gray, A. L. (2002).Beginning literacy: Links among teacher knowledge, teacher practice, and student learning. *Journal of Learning Disabilities*, 35(1), 70-86.

Moats, L.C. (1994). The missing foundation in teacher education: Knowledge of the

structure of spoken and written language. *Annals of Dyslexia,* 4 (12), 81-102.

http://dx.doi.org/10.1007/BF02648156

Moats, L. (2009). Knowledge foundations for teaching reading and spelling. *Reading and*

Writing: An Interdisciplinary Journal, 22(4), 379–

399. https://doi.org/10.1007/s11145-009-9162-1

National Assessment of Educational Progress (2017).*The nation's report card*: Reading

2017. Washington, DC: National Cen-ter for Educational Statistics.

National Commission on Teaching & America's Future. (2016). *What matters now: A*

new compact for teaching and learning.

https://files.eric.ed.gov/fulltext/ED572506.pdf

Neuman, S.B., & Cunningham, L. (2009). The impact of professional development and

coaching on early language and literacy instructional practices. *American*

Educational Research Association, 2, 532-566.

https://www.jstor.org/stable/40284801

Nguyen, H.C. (2018). An investigation of professional development among educational

policy-makers, institutional leaders and teachers. *Management in Education,*

33(1), 32-36. https://doi.org/10.1177/0892020618781678

O'Conner, R., Horwood, T.J., Vas, J., Wang, K., Burden, F., Mack, A., Gdula, J.,

Zumdahl, J., Schmidt, J., Roberts, T., Murphy, M., Decker, S., Irazola, S., Cronin,

B., Cronin, C., Arthur, A., Hawk, C. K., Lagana-Riordan, C., Robbins, M., &

Price, D. (2009). *Evaluation of the texas adolescent literacy academies (TALA): Interim, report #1*.

Parsons, A., Parsons, S., Dodman, S., Nuland, L., Pierczynski, M., & Ramirez, E. (2019). Longitudinal literacy professional development in an urban elementary charter school. *The Journal of Educational Research,* 112(4), 447-462. https://doi.org/10.80./00220671.20181552915

Perkins, J., & Cooter, K. (2013). An investigation of the efficacy of one urban literacy academy: enhancing teacher capacity through professional development. *Reading Horizons: A Journal of Literacy and Language Arts,* 52(2), 181-209. https://scholarworks.wmich.edu/cgi/viewcontent.cgi?article=3074&context=reading_horizons

Piasa, S., Justice, L., O'Connell, A., Mauck, S., Weber-Mayrer, M., Schachter, R., Farley, K., & Spear, C. (2017). Effectiveness of large-scale, state-sponsored language and literacy professional development on early childhood educator outcomes. *Journal of Research on Educational Effectiveness,* 10(2), 354-378. https://dx.doi.org/10.1080/19345747.2016.1270378

Piasta, S.B., Park, S., Farley, K.S., Justice, L.M., & O'Connel, A.A. (2019). Early childhood educators' knowledge about language and literacy: Associations with practice and children's learning. *Dyslexia,* 26, 137-135. DOI: 10.1002/dys.1612

Piasta, S.B., Ramirez, P.S., Farley, K.S., Justice, L.M., & Park, S. (2020). Exploring the

nature of associations between educators' knowledge and their emergent literacy classroom practices. *Reading and Writing,* 33, 1399-1422. https://doi.org/10.1007/s11145-019-10013-4

Piasta, S., Farley, K., Mauck, S., Ramirez, P., Schachter, R., O'Connell, A., Justice, L., Spear, C., & Weber-Mayrer, M. (2020). At-scale, state-sponsored language and literacy professional development: impacts on early childhood classroom practices and children's outcomes. *Journal of Educational Psychology,* 112(2), 329-343. https://dx.doi.org/10.1037/edu0000380

Pittman, Zhang, S., Binks-Cantrell, E., Hudson, A., & Joshi, R. M. (2020). Teachers' knowledge about language constructs related to literacy skills and student achievement in low socio-economic status schools. *Dyslexia (Chichester, England)*, *26*(2), 200–219. https://doi.org/10.1002/dys.1628

Podhajski, B., Mather, N., Nathan, J., Sammons, J. (2009). Professional development in scientifically based reading instruction teacher knowledge and reading outcomes. *Journal of Learning Disabilities,* 42(5), 403-417. https://doi.org/10.1177%2F0022219409338737

Reading Rockets. https://www.readingrockets.org/reading-101/reading-and-writing-basics/alphabet-knowledge

Reading Rockets. https://www.readingrockets.org/reading-101/reading-and-writing-

basics/oral-language

Richardson, V. (2003). The dilemmas of professional development. *The Phi Delta Kappan*, 84(5), 401-406. https://doi.org/10.1177/003172170308400515

Rousclup, E.E. & Maring, G. H. (1992). Portfolios for a community of learners. *Journal of Reading,* 35(5), 378-385. https://www.jstor.org/stable/40032126

Smith, O.L., & Robinson, R. (2020). Teacher perceptions and implementation of content-area literacy professional development program. *Journal of Educational Research & Practice*, 10(1), 55-69. DOI:10.5590/JERAP.2020.10.1.04

Smith, N.L., & Williams, B.K. (2020). Supporting middle school language arts teachers through professional development. *Reading Psychology*, 41(5), 403-419. https://doi.org/10/1080/02702711.2020.1768984

Stark, H., Eadie, P., Snow, P., & Goldfeld, S. (2019). The impact of a sustained oral language professional learning program on Australian early year' teachers' knowledge, practice and beliefs: a mixed-methods exploration. *Professional Development in Education,* 46(2), 178-194. https://doi.org/10.1080/19415257.2019.1603170

Stewart, K. R. (2003). *The impact of kindergarten teacher reading academies on*

instructional strategies implemented in the classroom as perceived by selected

kindergarten teachers in the state of texas. [Doctoral dissertation, Texas A & M

University].

Texas Administrative Code. (2012) Number and Content of Required Continuing

Professional Education Hours.

Ch.§232.11. https://tea.texas.gov/sites/default/files/ch232a.pdf

Texas Commission on Public School Finance. (2018). *Funding for impact: Equitable*

funding for students who need it most.

https://tea.texas.gov/sites/default/files/Texas%20Commission%20on%20Public%

20School%20Finance%20Final%20Report.pdf

Texas Education Agency. (2019). Program guidelines: 2018-2019 reading excellence and

academies development (READ). https://tea.texas.gov/sites/default/files/2018-

2019%20Reading%20Excellence%20and%20Academies%20Development%20%

28READ%29%20-%20Program%20Guidelines.pdf

Texas Education Agency. (2020). *Texas reading academies content overview a house bill*

3 initiative from the 86ᵗʰ legislative session [Infographic].

https://tea.texas.gov/sites/default/files/tra_overviewparticipantdetails_final_1_202

0.pdf

Texas Education Agency. (2019). *Science of teaching reading initiatives* [Infographic].

https://tea.texas.gov/sites/default/files/ScienceofTeachingReadingInitiatives1_8_2

021.pdf

Texas Education Agency. (2021). *Implementation of house bill 3 texas reading*

academies [Infographic].

https://tea.texas.gov/sites/default/files/ReadingAcademiesImplementation1_8_202

1.pdf

Texas Education Agency. (2022). *House bill 3 texas reading academies*

[Powerpoint]. https://tea.texas.gov/sites/default/files/reading-academies-year-3-

updates.pdf

Texas Education Agency. (2022). *Continuing professional education information.*

https://tea.texas.gov/texas-educators/preparation-and-continuing-

education/continuing-professional-education-

cpe#:~:text=The%20appropriate%20number%20of%20clock,educator%20holds

%20multiple%20classroom%20certificates.

The Glossary of Education Reform. https://www.edglossary.org/assessment/

Tschannen-Moran, M., & McMaster, P. (2009) Sources of self-efficacy: Four

professional development formats and their relationship to self-efficacy and

implementation of a new teaching strategy. *The Elementary School Journal,*

110(2), 228-245. https://doi.org/10.1086/605771

Yates, S.M. (2007). Teachers' perceptions of their professional learning activities.

International Education Journal, 8(2), 213-221. http://iej.com.au

Yoon, K. S., Duncan, T., Wen-Yu Lee, S., Scarloss, B., & Shapley, K.L.. (2007).

Reviewing the evidence on how teacher professional development affects student

achievement. *Issues and Answers Repor*t, 33. http://ies.ed.gov/ncee/edlabs.

APPENDIX A:

INFORMED CONSENT

INFORMED CONSENT: ADULT RESEARCH PARTICIPANT

You are being asked to participate in the research project described below. Your participation in this study is entirely voluntary and you may refuse to participate, or you may decide to stop your participation at any time. Should you refuse to participate in the study or should you withdraw your consent and stop participation in the study, your decision will involve no penalty or loss of benefits to which you may otherwise be entitled. You are being asked to read the information below carefully and ask questions about anything you don't understand before deciding whether or not to participate.

Title: A STUDY OF THE EFFECTIVENESS OF STATEWIDE MANDATED PROFESSIONAL DEVELOPMENT

Student Investigator(s): Elizabeth Walsh

Faculty Sponsor: Dr. Roberta Raymond & Dr. Heather Pule

Purpose of the Study: The purpose of this study is determine the effectiveness of statewide mandated professional development while highlighting teacher experiences throughout the professional development.

Procedures: Participants will be asked several interview questions by the researcher. The interview will take place in one sitting.

Expected Duration: This study will last one school year.

Risks of Participation: There is no foreseeable risks of involvement in this study.

Benefits to the Subject

There is no direct benefit received from your participation in this study, but your participation will help the investigator(s) to better understand if the House Bill 3 Reading Academies made a difference in knowledge and instruction.

Confidentiality of Records

Every effort will be made to maintain the confidentiality of your study records. The data collected from the study will be used for educational and publication purposes, however, you will not be identified by name. For federal audit purposes, the participant's documentation for this research project will be maintained and safeguarded by the Principal Investigator or Faculty Sponsor for a minimum of three years after completion of the study. After that time, the participant's documentation may be destroyed.

Compensation

There is no financial compensation to be offered for participation in the study.

Investigator's Right to Withdraw Participant

The investigator has the right to withdraw you from this study at any time.

Contact Information for Questions or Problems

The investigator has offered to answer all of your questions. If you have additional questions during the course of this study about the research or any related problem, you may contact the Student Researcher, Elizabeth Walsh by telephone at 713-240-0260 or by email at walsh@uhcl.edu.

The Faculty Sponsor, Dr. Roberta Raymond and Dr. Heather Pule may be contacted by email at Raymond@uhcl.edu & Pule@uhcl.edu.

Signatures

Your signature below acknowledges your voluntary participation in this research project. Such participation does not release the investigator(s), institution(s), sponsor(s) or granting agency(ies) from their professional and ethical responsibility to you. By signing the form, you are not waiving any of your legal rights.

The purpose of this study, procedures to be followed, and explanation of risks or benefits have been explained to you. You have been allowed to ask questions and your questions have been answered to your satisfaction. You have been told who to contact if you have additional questions. You have read this consent form and voluntarily agree to participate as a subject in this study. You are free to withdraw your consent at any time by contacting the Principle Investigator or Student Researcher/Faculty Sponsor. You will be given a copy of the consent form you have signed.

Subject's printed name: Click or tap here to enter text.

Signature of Subject: Click or tap here to enter text.

Date: Click or tap here to enter text.

Using language that is understandable and appropriate, I have discussed this project and the items listed above with the subject.

Printed name and title: Click or tap here to enter text.

Signature of Person Obtaining Consent: Click or tap here to enter text.

Date: Click or tap here to enter text.

APPENDIX B:

INTERVIEW PROTOCOL

1.   What do you teach?

2.   How long have you been in your role?

3.   Have you taught any other grade levels?

4.   How did you feel about the Reading Academies prior to participating in
       the professional development?

5.   What were your feelings about the PD once you began the modules?

6.   What were your feelings about the PD after you completed the modules?

7.   Did your campus have any conversations around the content learned
       through the PD? If so, what did that look like?

8.   What did you find was the most beneficial piece of the PD?

9.   What did you find was the least beneficial piece of the PD?

10.   Have you been able to implement anything you learned? If so, what? In
       what ways?

11.   Was there anything you learned that you didn't already know?

12. What are some things that could have been done differently to improve your
experience with the PD?

13. Is there anything else you'd like to share about the PD that we haven't already
discussed?