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The Impact of Mississippi's K-3 Literacy Initiative Professional Development

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THE IMPACT OF MISSISSIPPI'S K-3 LITERACY INITIATIVE PROFESSIONAL
DEVELOPMENT

by

Billie S. Payette Fick

A Dissertation
Submitted to the Graduate School,
the College of Education and Human Sciences
and the School of Education
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

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ABSTRACT

This quantitative survey study explored the statistical significance of participation in the training Language Essentials for Teachers of Reading and Spelling (LETRS) by early childhood educators in Mississippi, specifically K-3. The three outcome measures were teachers' beliefs related to Mississippi's K-3 Literacy Initiative: instructional practices, student learning outcomes, and barriers of technology use in literacy instruction. A total of 78 people completed the LETRS Survey, which consisted of a five-point scale. Demographic data included: grade range, teaching experience, number of students taught weekly, highest degree earned, teaching a tested subject/grade, mode of instructional delivery, technological barriers, and parental support for remote literacy skills teaching and face-to-face phonics teaching. Data analyses with Spearman's rho and linear regression yielded no statistically significant relationships between the independent variable (LETRS units of training the teacher attended) and the beliefs outcome measures regarding effectiveness of the LETRS professional development (face-to-face phonics instruction, parental literacy skills support, raising student outcomes in literacy skills, and technological barriers to phonics learning for students.)

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My journey of forty-plus years in education has provided me the opportunity to observe many great teachers, coaches, teacher assistants, and administrators. Their common thread is the love of children and the desire to provide a better learning experience for all children.

DEDICATION

This dissertation is dedicated to the memory of my mother, Sue Betty Robertson. She was a single mother who displayed perseverance, diligence, and a strong work ethic. Those traits have served as examples to me during times of struggles in my life and throughout this project.

Additionally, this dissertation is dedicated to my children and their spouses. Dr. Steven Hampton, you encouraged me to go through the doctoral program with you and it has been the honor of a lifetime. Thank you for spending this time with me. To Sandy, Shawn, and Scott, thank you for your support, encouragement, and devotion to our family. Thank you to my daughter, Suzanne, for your support, encouragement, and faithfulness.

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To my fourteen grandchildren, Anna Catherine, Emma, Lindsey, Avery, Ann Hardin, Ryan, Will, Ella, Julianna, Ethan, Whitley, Knox, McKinley, and Lucy, may you remember to work diligently to reach your goals and endure whatever problems you encounter. Remember, you are capable of accomplishing all your dreams. Always finish the race set before you.

Thank you to all my family, friends, and colleagues who have been my cheerleaders throughout this long process and have given unending support and belief in me that have helped me to complete the process.

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LIST OF ABBREVIATIONS

<i>ESSA</i>	Every Student Succeed Act
<i>CCOT</i>	Coach’s Classroom Observation Tool
<i>ILA</i>	International Literacy Association
<i>IRA</i>	International Reading Association
<i>IRP</i>	Individual Reading Plan
<i>LETRS</i>	Language Essentials for Teachers of Reading and Spelling
<i>MAAP-ELA</i>	Mississippi Academic Assessment -English Language Arts
<i>MDE</i>	Mississippi Department of Education
<i>MTSS</i>	Multi-Tier System of Supports
NAEP	National Assessment of Educational Progress
NCLB	No Child Left Behind
<i>RTTT</i>	Race To The Top
<i>TKELS</i>	Teacher Knowledge of Early Literacy Skills
<i>ZPD</i>	Zone of Proximal Development

CHAPTER I- INTRODUCTION

Reading is considered a necessary skill for an adult to achieve success. The International Literacy Association defines literacy as “the ability to identify, understand, interpret, create, compute, and communicate using visual, audible, and digital materials across disciplines and in any context” (Stevenson, M. ILA 2017, p. 2). Literacy is a lifelong event that allows a person to communicate and obtain aspirations for themselves and contribute to a better world (Montoya, S., (2018). Reading instruction at the elementary school level is essential to the continuation of student success throughout a student’s scholarly path. Reading on grade level in third grade gives the opportunity to each student to complete his or her educational path. The student who is not reading on grade level has a significant probability of dropping out of school. (Hernandez, 2011). Although complex, the English language is not impossible to master. Instructional practices are essential for teachers to master to provide effective instructional language skills to understand the meaning of the texts (Avalos, M., et al., 2009).

Mississippi has struggled for a long time with the lowest students outcomes for literacy in the United States on the National Assessment of Educational Progress. It is shown consistently in the state of Mississippi fourth-graders as scored below the basic level of achievement and historically below the rest of the nation on reading (U. S. Department of Education, 2013). Prompted by long-time poor student performance on tests, Mississippi legislators establish a law which would provide students a firm foundation for language skills, and students would be encouraged to begin reading in kindergarten (Mississippi’s Literacy-Based Promotion Act: An Inside Look, February 2019).

The legislature established the Mississippi Literacy-Based Promotion Act in 2013 with the intent to have third-grade students read on or above grade level (Folsom et al., 2017). The Mississippi Department of Education initiated a professional development program, Mississippi K-3 Literacy Initiative, for the entire state's teachers. The Mississippi K-3 Literacy Initiative provides kindergarten through third-grade teachers across the state a comprehensive language skills professional development program. Teachers attend professional development to understand better the importance reading skills and increase knowledge of subject matter for literacy skills. Educators must become immersed in all aspects of how students learn to read and learn ways to evaluate why students are having problems and know best practices to improve the reading skills of students (Folsom et al., 2017). Because teacher knowledge can influence teaching, teachers' knowledge can influence students' learning outcomes. Teachers' linguistic and language knowledge plays an essential role in supporting learners at the beginning-to-read stage. Professional development programs provides teachers' the skills influencing student learning outcomes (Folsom et al., 2017). With the world changing daily, teachers need a sustainable foundation which fosters continued growth through professional development. In order to impact the manner in which a classroom is taught and the degree of student achievement, this professional development should be implemented continually throughout a semester or school year.

Along these lines, the MDE initiated early literacy professional development and literacy coaches in January of 2014. MDE began offering Language Essentials for Teachers of Reading and Spelling LETRS program to educators across Mississippi to improve early literacy skills (LETRS) (Moats & Tolman, 2009). LETRS includes a wide

range of content, delivered through eight units which address effective early literacy skills and writing skills. The content focuses on the transfer of research to classroom application. The LETRS training has two phases which usually take two years to complete. The teachers complete online modules before attending face-to-face training. The first two units require preliminary preparation which consists of six weeks of online coursework followed by a test. Participants who complete the required preliminary coursework can attend face-to-face one-day training with a certified LETRS trainer who works for Voyager Sopris Learning. Educators complete one through four professional development units on literacy skills in an academic year and then attend a one-day training. The teachers will complete four professional development units in an academic year and complete units one through four (year 1) before completing units five through eight (year 2). LETRS professional development links in-depth research with practical classroom success and provides educators with skills and a deep understanding of reading fundamentals and tools to teach language and literacy skills to all students regardless of their ability levels (Folsom et al., 2017).

With the establishment of the LETRS professional development during the school year 2013 - 2014, MDE assigned literacy coaches to targeted schools to sustain professional development by working with kindergarten through third-grade teachers to strengthen their knowledge of literacy skills. (Folsom et al., 2017). Target schools were identified based upon the language state assessment and the number of students who scored basic and minimal (Folsom et al., 2017). The higher the percentage of students scoring basic and minimal serve as target schools. The literacy coaches were assigned to 50 schools with the anticipation which their assistance would reduce the number of students

not achieving their grade level standards (Folsom et al., 2017). In the 2015-2016 school year, MDE increased its total participation number to 126 schools. In their roles, literacy coaches monitor teachers in classroom settings to guide the transfer of knowledge to practice (Folsom et al., 2017).

Moreover, in the fall of 2014, MDE enlisted the Regional Educational Laboratory Southeast (REL) to develop two instruments to collect data to determine educator growth (Folsom et al., 2017). MDE solicited REL to develop a Teacher Knowledge of Early Literacy Skills (TKELS) survey for collecting data concerning teaching knowledge and application, using questions which revolve around early literacy skills (Folsom et al., 2017). MDE also asked REL to provide a second instrument the Coach's Classroom Observation Tool (CCOT), is utilized by the literacy coaches to observe the classroom teacher (Folsom et al., 2017). The TKELS surveyed classroom teachers who had attended LETRS training four times during the 2014 - 2015 school year (Folsom et al., 2017). According to Folsom et al. (2017), MDE used the information to identify needed adjustments in teacher training by using these ratings to obtain information about teachers' literacy skills instruction. The TKELS assimilated information on student interaction in literacy skills, teaching strategies, instructional practices, and the connection with the changes made and educators' progress in LETRS. In 2014-2015 when the school year was over, the survey of the teacher who finished the program the mean showed an increase of the mean by 2.90 points more than teachers who did not complete LETRS training (Folsom et al., 2017). The final survey results for teachers who had not participated in LETRS measured at the 54th percentile with the TKELS survey compared to teachers who had finished LETRS, who measured at the 65th percentile.

Results also revealed teachers grew in early literacy skills during their training of LETRS (Folsom et al., 2017). Consistent with its aim to increase teachers' knowledge in early literacy skills, LETRS professional development contributed to teachers' growth. Before the Mississippi Literacy-Based Promotion Act in 2013, teachers across Mississippi received limited literacy skills training of high-quality, evidence-based phonics instruction (MDE.k12.org). LETRS training offered teachers the opportunity to learn about quality literacy instruction, student engagement, and teacher competencies.

In brief, the Mississippi K-3 Literacy Initiative model provides educators with a foundation in best practices for literacy instruction. The MDE statewide professional development training model implementation aims to demonstrate people, not programs, will improve literacy outcomes. The Mississippi Literacy-Based Promotion Act in 2013 and subsequent implementation of statewide professional development to improve literacy skills instruction to students across Mississippi, with over 25,000 educators in Mississippi receiving literacy skills professional development.

Statement of the Problem

Reading is an essential skill, foundational for learning other subjects, and highly correlated to academic success (Hanover Research, 2016). Children who are not proficient readers seldom make sufficient gains academically, do not graduate with their peers, or drop out of school without graduating. A national study looked at data comparing dropout rates and reading achievement, poverty, and race or ethnicity among third-graders; emerging readers were one-third of the students measured in the investigation, but three-fifths failed to receive a diploma or finish high school with their peers. (Hernandez, 2011). Regarding expectations, kindergarten through third-grade

students learn skills to be better readers, and students from third grade and beyond are reading informational texts to gain knowledge. Third-grade students in Mississippi school districts have a large retention rate, indicating these students may not read with comprehension or pass the required summative assessment. This retention is consequential because students retained have tend to never catch up in achievement and are not completers of school than those students promoted (Perkins, S. S., & Green, R. L. (2018, January). Meanwhile, the mastery of language skills in the kindergarten through third grade appears to be an indicator for school success beyond third-grade categorization (Hanover Research, 2016). In addition, teachers significantly influence students' academic success (Chetty et al., 2014).

In 2013 MDE planned and implemented the Mississippi K-3 Literacy Initiative, which provides professional development to in-service teachers, university professors of literacy, literacy coaches, and classroom literacy teachers to improve literacy knowledge and usage and teaching skills in early literacy. MDE is professional development in literacy skills to teachers to improve student outcomes. However, the research shows Mississippi must continue to improve teacher's literacy skills.

Research Questions

The research questions for the study are:

1. To what extent do teachers perceive LETRS professional development changed their literacy instructional practices?
2. To what extent do teachers perceive LETRS professional development changed student learning outcomes?

3. To what extent do teachers perceive COVID-19 influenced their attitudes toward student positive learning outcomes?

Definitions of Terms

The study utilized the following terms:

1. Literacy Retention Policy- "Mandatory retention" laws, adopted by many states, students not reading at the required level as measured by a literacy assessment and do not meet the guideline for an exemption.
2. Instructional Strategy- Instruction meets the specific needs of students to improve their ability to grasp the objective necessary to move to a more complex objective (Shanahan et al., 2010).
3. Proficiency- The students who has the score which correlates to the "proficient" achievement category on assessments, as calculated by MDE. This classification represents the percentage of students whose assessment scores placed them in the proficient or advanced achievement categories.
4. Reading Instruction- As described by the International Literacy Association, this term involves the explicit teacher of certain skills which are foundational to a student's success such as phonological awareness, alphabetic principle, concepts of print, word identification, and fluency in conjunction with skillsets which include learning essential vocabulary and comprehension of text (2018).
5. Third-Grade Reading Summative Assessment- A multiple-choice test given in the spring semester online or via a computer, covering the Mississippi College-and Career-Readiness Standards.

6. The Mississippi Literacy-Based Promotion Act- Requires students to take the third-grade MAAP-ELA Reading Summative Assessment, to determine if students read on the third grade level. (MDE, 2015).
7. Strategy- Plans designed to provide intention teaching of specific reading skills of a text (Afflerbach et al., 2017).
8. International Reading Association (IRA) - An organization which advances reading proficiency (ILA).
9. Preservice Teachers - A preservice teacher is a student in a college of education program with the intent to receive a teaching license.
10. Mississippi's K-3 Early Literacy Professional Development Initiative- A professional develop program to build a strong foundation in literacy skills and reading instruction to improve instruction and increase student outcomes in literacy skills (MDE, 2014).

Delimitations

This study requested responses from educators from Pre-kindergarten through fifth grade within districts and universities across the state of Mississippi. The researcher conducted the study and the study is entirely quantitative. Participants did not have the opportunity to respond. The reported results show the statistic calculated from the study with no additional data considered.

Assumptions

The assumptions listed below guided this study:

1. Teachers participated in the virtual and in-person LETRS training.

2. Participating teachers had information and resources to complete the training correctly.

Justification

This study is significant because it explores the relationship between educators' professional development in LETRS for literacy instruction alongside educators' perceptions of related student achievement outcomes. The role of teacher knowledge should drive professional development and, after which, lead to high-quality experiences for students. The teachers' beliefs which directly influence instructional practices (Kersiant, G. et al., 2001), is essential. This study aimed to examine the need for constructive professional development which would enhance the quality of teaching in Mississippi schools.

National Assessment for Educational Progress (NAEP) in 2005, the proportion of eighth-graders who scored basic or above in reading decreased from 63% in 1998 to 61% (Perie, M., et al., 2005). The 2013 NAEP score in reading dropped to 64% decreasing 2 percent from the NAEP scores in 2003. Also, the reading scores for the eighth-grade for was (253, which was 13 points lower than the national average, which was (266), where the overall scores ranged from 248-277 (Glymph, A., & Burg, S., 2014). In 2015, Mississippi's 8th-grade NAEP scores fell one point to 252, with the national average of 264, but the fourth-grade reading scores increased five points to 214 with the national average of 221 (McKenzie, S. C. & Ritter, G. W. 2015). However, in 2017, eighth-grade reading gained four points to 256, with the national average of 265 and fourth-grade scores gained one point to 215, with the national average of 221 (Rahman, T., et al., 2017). More recently, in the 2019 NAEP assessment of reading, Mississippi was the only

state to improve in fourth grade with a 219 and the national average of 219 and in eighth grade, the score was 256, with the national average of 262 (Ji, C., et al., 2021).

Mississippi is in the process of making a change which promises to establish improvement for students. The MDE implementation of Common Core State Standards MDE set out to provide an education where students can meet the challenges of the 21st century. Mississippi school district leaders must promote the concept of life-long learning. Educational leaders will need to develop and encourage continuous professional to produce an adequately educated population to strengthen Mississippi.

CHAPTER II- Review of Literature

The literature concerning the problem of providing literacy skills professional development offered a view of a vast amount of information. The research highlighted the significance and value of the federal government and the state government's role in student reading progress in the past three decades. It further accentuated the critical role high-quality teachers perform in producing student learning outcomes and quality professional development affects teaching quality. According to Gulamhussein, A., (2013), the presentation of professional development is not producing the growth in teacher knowledge, and he also states this presentation "operates under a faulty theory of teacher learning" (p. 10). He further contended teachers' training programs have not aligned with best practices. Specifically, learning new subject matter has focused on digging deeper into the subject matter content to improve instruction for the students (Gulamhussein, 2013).

Theoretical Framework

The basis for this study includes Vygotsky's Theory of Social Constructivism Research (Danielson, 1996; Vygotsky, 1978). Constructivists have described learning as a process of having a relationship with students within the school environment which will produce learning (Merriam, S. & Caffarella, R., 1999). According to (McDonald, J., & Lever-Duffy, J., 2011), constructivists have argued individuals either learn through "constructing their knowledge through cognitive processes or via collaboration with a group of learners to construct a common core of knowledge" (p. 30). Deeply rooted in the constructivist pedagogy, the frameworks address four theories of cognitive processing, as in decision-making, problem-solving, synthesizing, and evaluating. Inclusion of the

framework has been deemed essential to professional development because of the extensive interpersonal and social interaction involved, particularly in team collaboration. Constructivism is quite often used as a theory for learning (Woolfolk, 2010).

Vygotsky referred to the gap between what the child can do with assistance and what they can do by themselves as the “zone of proximal development” (Vygotsky, 1978). Vygotsky also asserted the identification of this “zone of proximal development” allows scaffolding of instructional strategy for a student to learn a specific task and receive appropriate assistance (Elgas et al., 1998). Other researchers have furthered the idea which individual learning occurs in a rich social context which supports scaffolding (Clark & Graves, 2004; Lantolf & Poehner, 2008; Lantolf & Thorne, 2006).

McLeod (2010) pointed out the necessity of having an awareness of the student’s current performance level and promoting mastery of more advanced concepts and skills when applying the concept of developing proximally. He added learning is successful when social interaction is encouraged between the teacher and students. Vygotsky (1986) believed by talking and communicating with adults, children’s learning could increase. He also emphasized in his theory of language development the primary function of speech is social contact and that the social and cultural nature of a child's development is subject to interaction with adults. Au (1998) wrote that educators need to help students grow through literacy and their teachers should use literacy to promote children’s position in the adult world.

In the development of his teaching and learning theory, Vygotsky noted a foundation of trust and elaborated on three major concepts:

1. Sociocultural relationship with classroom community,

2. More knowledgeable other (MKO) (relationship with someone who has the higher ability than the person learning); and,
3. Zone of proximal development (ZPD) when the students can master a task with the help of a person whom has already mastered the task. Educators often refer to ZPD as scaffolding. (Vygotsky, L. S., 1978)

Danielson (2007) maintained what a person knows already is essential to learning new skills, and she reinforced the assertion in which using the effective method of instruction is essential to teaching practices.

Historical Perspective

The history of educational reform demonstrates the significance of advancing educational achievement of all students and the significance of reading as a factor. Case in point, the United States' educational system has been under a microscope by critics for several decades. Performance and execution on the National Assessment of Education Progress (NAEP), a test which measures student achievement, has stagnated, indicated low graduation rates, and brought about federal government monitoring of school and district performance at the national level (Kozol, 2002). In 1983, *A Nation at Risk*, brought to light the issues within the American educational system and intensified the concerns felt by Americans for the public schools and their success. The report states, "the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatened our very future as a nation and a people" (Wong & Nicotera, 2007, p. 1). The report pointed out the issues with the educational system (Wong & Nicotera, 2007). This report expanded efforts to advance the level of content teaching by

recommending the implementation of state-wide curriculum standards, graduation requirements, improved teacher training, and higher teacher pay.

In addition, using research findings from the National Research Council, two other publications explained reading-related definitions and reading activities to improve reading for young children *Every Child a Reader* and *Preventing Reading Difficulties in Young Children* (Heibert et al., 1998). This *Every Child a Reader* pamphlet's purpose is the description of research-based practices for the classroom.

In 1998, the Reading Excellence Act by President Bill Clinton's administration increased concern for children's reading ability, as evidenced by scores on the NAEP (Edmondson, 2005). According to Edmonson (2005), the passage of the Reading Excellence Act established goals to develop programs to have students ready for school in that the students would be grade-level readers by third-grade completion. These goals highlighted teachers learning best practices for instruction, and improve reading skills, and provide parents with information on the importance of reading.

According to Klein (2015), the No Child Left Behind Act established as a law on January 8, 2002, in which this initiative reformed public education on the elementary and secondary levels. This law is designed for K-12 public schools to stress accountability for how students learn. Klein (2015) also noted that the No Child Left Behind Act focused on course content and at every grade. President Bush initiated Reading First Plan to provide K-3 students scientific-based instruction, so that third-grade students could read on grade level (Kauerz, 2002). A common interest throughout all of these national reading initiatives is to increase the reading skills of all American children. The Reading Excellence Act of 1998 emphasized the importance of reading for students to read

successfully. As in previous legislation, the Reading Excellence Act emphasized students in the third grade read at the completion of the year, read on third grade level (National Research Council, 1998).

No Child Left Behind Act of NCLB 2001 delegates schools provide scientifically based research strategies and staff development that proved effective and taught by a highly qualified teacher and develop assessments for grade levels (Behind, No Child Left, 2002). The definition for highly qualified teachers included maintaining continuing education credits (CEUs) through ongoing professional development or educational coursework, demonstrating continuous improvement and professional growth. NCLB also required states to test every child between grades three and eight in reading and mathematics.

According to Ravitch (2013), President Barack Obama announced Race to the Top (RTTT) in 2009, a competition for federal money to be applied directly to schools. In addition, RTTT did not depart from NCLB but was a continuation of the conversation about testing and accountability to improve failing public schools.). The bill ensured that every child receives instruction with high academic standards and it encouraged innovation for evidence-based interventions, annual assessments to measure students' progress, and accountability to improve lowest-performing schools (Martin, M. & Johnson, M. , 2016). ESSA eliminated several items from the NCLB, such as the Adequate Yearly Progress and Highly Qualified Teacher requirements and also provided the opportunity states to change to the proficiency levels for schools (Rowland, C., 2017).

The ESSA legislation spotlighted educational leadership, recognizing the significant role leadership has in school improvement and student achievement.

According to (Herman et. al., 2016), school leaders are a "powerful driver of improved education outcomes" (p. 1). The ESSA definition of a school leader includes

- (a) "an employee or officer of an elementary school or secondary school, local educational agency, or other entity operating an elementary school or secondary school"
- (b) "responsible for the daily instructional leadership and managerial operations in the elementary school or secondary school building" (Herman et al. 2016, p. 297).

In 2015 MDE implemented the Mississippi College and Career-Readiness Standards for English Language Arts, 2015 (<https://www.mdek12.org>). The standards provided a guide for teachers to teach their students subject matter that is essential to be proficient at the next grade level.

In 2013, Governor Phil Bryant enacted the Literacy-Based Promotion Act to eliminate social promotion and below proficient level language scores (Folsom et al., 2017). The legislation's primary purpose consisted of improving the reading skills of public school students in kindergarten, first, second, and third grade are reading at the appropriate level or above by the end of their grade. When data from assessment demonstrates which students are at risk of not meeting promotion standards, students are provided intensive accelerated reading programs. This goal corresponds to the Southeast Comprehensive Center Study (2016), which indicates that students from kindergarten through third grade could benefit from research-based intervention opportunities and monitor students' progress to prevent retention upon completing third grade. The adoption of Mississippi Senate Bill 2347 (2013) has prompted school districts of Mississippi to examine the components of reading instruction and assessment to advance the teaching and learning of literacy.

The Literacy-Based Promotion Act outlined expectations and consequences for third-grade students not meeting requirements as prescribed. The bill aimed to have all school third-grade students reach a level of reading achievement in foundational literacy skills before promotion to fourth grade. It demonstrated that when students score below grade level and are not on grade level by third grade, the probability is more significant that they will drop out (Southeast Comprehensive Center Study, 2016).

Since 2016, the Literacy-Based Promotion Act has required Individual Reading Plans (IRP) for students with identified reading deficiencies in kindergarten through third grade. The IRP requirement correlated with the Multi-Tier System of Supports (MTSS) documentation required for Tier III intensive interventions with these students (Multi-Tiered System of Supports Guidance Document, 2020).

Quality Professional Development

“Effective professional development enables educators to develop the knowledge and skills they need to address students’ learning challenges. To be effective, professional development requires thoughtful planning followed by careful implementation with feedback to ensure it responds to educators’ learning needs” (Mizell, H., 2010, p.10). According to Darling-Hammond et al., (2017), classroom instruction and student outcomes seem unsuccessful to changes with initiatives in professional development. (Darling-Hammond et al., 2009; Darling-Hammond et al. (2017) reviewed 35 studies to defined features of professional development. The studies identified the necessary components of effective models for professional development:

1. Concentration on the subject matter;
2. Include interactive practices for learning;

3. Provide time for sharing ideas and practices on the subject matter;
4. Provide best practices demonstrations;
5. Support sharing ideas with expert coaching;
6. Align time for reflection and soliciting feedback; and
7. Provides adequate time to implement. (Darling-Hammond et al., 2009; Darling-Hammond et al., 2017).

Darling-Hammond et al. (2009); Darling-Hammond et al., 2017) went on to say educators should have the opportunity to progress at their own pace. Kennedy (2007) pointed out that for schools to improve, teachers need to grow their skills because the group time of the teachers' collective could improve student outcomes. Further, teachers improve through transformative learning by sharing with each other their instructional skills and developing relationships, collaborating, and sharing best practices (Kennedy, 2005). Some researchers have stated that teachers must believe the content is essential to their teaching needs (Darling- Hammond, 1997; Blase & Blase, 1998; Smith, 2007). Porche et al. (2012) suggested for professional development to change instruction it should be researched based.

Professional development has been considered an essential part in all educational improvement efforts (Yoon et al., 2008). Every reform plan, restructure, or transformation in education has emphasized the classroom teacher's role as the main element in bringing about needed change (Goos, et al., 2007). According to the review of studies by (Yoon et al. 2007), "Professional development affects student achievement through three steps. First, professional development enhances teacher knowledge and skills. Second, better knowledge and skills improve classroom teaching. Third, improved

teaching raises student achievement” (p. 4). Likewise, teachers’ perceptions of professional development and their beliefs and attitudes have influenced instructional practices in the classroom (Bean et al., 2011).

According to Hattie (2009), in 72 studies, when teachers became involved in developing their strategies and the professional development provided for a substantial time, they could expect exponentially higher student outcomes than those who did not, $d= 0.66$ (p. 120). Accordingly, teachers’ participation in a substantial period of professional development sessions brought about an equivalence of a year’s student achievement growth. Jaquith et al., (2010) stated:

Research evidence supports the notion that changes in practice leading to student learning are most likely to be enabled when professional development is ongoing, intensive, and connected to practice and school initiatives; when it focuses on the teaching and learning of specific academic content; and when it builds strong collegial relationships focused on instruction and learning (p. 133).

Teacher Knowledge

Researchers have shown the importance of teachers’ having mastered the subject matter they are to teach as factors in student achievement (Darling-Hammond, (2000); Marzano, 2001; Odden et al., (2005). Koppich (2004) wrote, "teacher effectiveness trumps nearly every other variable, from class size to class composition, as the determinant of student achievement” (p. 2). In *Teacher Professional Development: A Primer for Parents & Community Members*, Lau (2004) maintains that the teachers’ expertise contributes 40% to 90% on test scores. The most significant factor for student

success in student learning within the classroom has been a trained, highly qualified teacher (Hattie, 2012; Morewood & Bean, 2011).

Boardman et al. (2005) notes the study of the teachers' perceptions and the importance of their perceptions on classroom practices. Teachers voiced that they would be more inclined to utilize the practices when provided the opportunity to individualize the practices for pupils' learning and behavioral requirements and see student growth when implementing the practice (Boardman, G., et al., 2005). When teachers receive sustained, focused professional development, the professional development will influence instructional skills (Opfer, V. & Pedder, D., 2011). Professional development that involves between 30 and 100 hours for a sustained time provided improvement in student outcomes (Darling-Hammond, L. & Richardson, N., 2009).

According to Joyce and Showers (1995), improved student outcomes and instructional strategies happen where the presenters prepare training designed for the teachers and then teachers implements the training strategies in their classroom. The training identified are subject matter and sustainable practices for participants with teaching methods and learning styles (Guskey & Yoon, 2009).

Professional development allows teachers to develop and provide high-quality instruction strategies for the students in their classroom. Hattie (2012) states that continuous professional development is necessary to show student growth. King and Newmann (2000) stated, "Since teachers have the most direct, sustained contact with students and considerable control over what is taught and the climate for learning, improving teachers' knowledge, skills, and dispositions through professional development is a critical step in improving student achievement" (p. 151). According to

Sanders and Rivers (1996), a solid knowledge of the subject matter is primary to teachers' efficiency, professionalism, and competence. Teachers who have command over the subject matter have shown the ability to provide thorough information explaining the concepts to classroom students (Piasta et al., 2009). The teacher should know the subject matter, connect the subject matter to the required objectives and teach this to the class (Dobbie, 2011).

Mullens et al. (1996) provide a quantitative study on the results of training and knowledge gained with changes to teaching strategies. Mullens et al. (1996) examined the four variables for the teacher's capability: educational achievement, training programs participation, subject matter knowledge; and, instructional approaches. The study analyzed 1,043 third-grade students' pretest-posttest achievement and concluded that learning improves when their teacher has complete mastery of the subject matter. Also, at the same time, the academic achievement of teachers and teaching experience did not improve students' learning.

An extensive study on professional development connects teacher knowledge to improved teacher instructional practices (Birman et al., 2000). The study demonstrates that:

Professional development should focus on deepening teachers' content knowledge and knowledge of how students learn particular content, provide active learning opportunities, and encourage coherence in teachers' professional development experiences. Schools and districts should pursue these goals by using activities that have a more significant duration and involve collective participation.

Although reform of professional development is more effective than traditional

reforms, the advantages of reform activities are explained primarily by the more significant duration of the activities (p. 32).

Guskey (2003) noted, "Significant advances in professional development will come only when both researchers and practitioners insist on improvements in student learning outcomes as the principle criterion of effectiveness" (p. 750).

The research demonstrates the critical need for professional development with validity and demonstrating gains in student assessments and knowledge, the research is still questioned (Odden et al., 2002). However, valuable and meaningful learning experiences have been identified as necessary to improve teaching practices (Meissel et al., 2016). Numerous studies have addressed crucial components of effective professional development, though a solution to improved instructional practices and student outcomes has not been identified (Guskey, 2003; Guskey & Yoon, 2009). Educational leaders have a demand to implement effective professional development in literacy instruction (Lynch, 2018). In addition, professional development programs should support the practices identified as effective in teachers' classroom implementations of skills and improving measurable student achievement (Antoniou & Kyriakides, 2013).

Buckingham et al. (2013) point to the significance that students who received instruction for three years do not have the basic foundation skills. Moats (2009) explains that teachers need language communication skills and need specific training on teaching phonics and literacy skills. Further, although teachers are aware of the need to teach literacy skills such as phonics, they may need additional training to increase their knowledge (Buckingham et al., 2013).

According to Fletcher et al. (2011), school-wide professional development designed for improved students' learning outcomes should be the strategy for implementing professional development among teachers. Research shows that the design of professional development should contain (Darling-Hammond et al., 2009):

1. Professional development should be intensive, ongoing, and connected to practice.
2. Professional development should focus on student learning and address the teaching of specific curriculum content.
3. Professional development should align with school improvement priorities and goals.
4. Professional development should build strong working relationships among teachers (Darling-Hammond et al., 2009, p. 9-11).

Fullan (2006) noted, teachers require differentiation just like their students do. Research has indicated that training does not fit all teachers (Loeser, 2008). Loeser also suggested that new approaches to professional development geared toward individual teacher growth involve implementing different models, including these: collaborative learning, coaching, technology networks, and focus group studies on promoting the continual learning necessary to enhance teacher expertise regarding high-quality teaching standards. Professional Learning Communities that focus on establishing and implementing innovative strategies have been considered essential toward improving teacher quality and instructional design utilizing meaningful professional development models that target instructional improvement (Dufour, 2007). One such study noted that professional learning communities and collaboration require shifting away from the

transmission model to a transformative-community model that focuses on how teachers learn rather than how much the provider can teach (Dufour & Marzano, 2011). Several complex roadblocks have inhibited the transformation of professional development to teachers without any specific agenda and changed to planned and organized training developed by teachers (McFarlan-Price, 2012). Kleickman et al. (2016) purported that teachers' beliefs and attitudes about professional development must change significantly in teacher instruction. Moreover, teacher beliefs in that study influenced instructional reforms in the classroom.

Teachers have brought various experiences to their classrooms, some formal and some environmental (Peterson-Miller et al., 1991; Joyce & Showers, 1995). Researchers have found that teachers often have reverted to teaching how they learned without a robust adult learning system (Peterson-Miller et al., 1991; Joyce & Showers, 1995). According to (Poglinco et al., 2003), teachers receive professional development to facilitate essential instructional practices; and shared decisions for best practice, and the coach provides examples of how to teach a standard in a grade with the coach giving input for the success of the teacher which offers professional development.

Literacy Coaches

Literacy coaches have offered many benefits (Biancarosa et al., 2010), facilitating collaboration between administrators, principals, coaches, and teachers (Ronfeldt et al., 2015). The Institute of Education Sciences (IES) conducted a four-year research study from 2004-2008 to determine the effects of the Literacy Collaborative Model. Biancarosa et al. (2008) studied the model to investigate the impact of collaboration and literacy coaches' effectiveness on teachers. The results show a growth

of 18% in the first year and the three-year growth of 38% with statistically significant student outcomes (Briancarosa et al., 2008).

Today MDE and schools across Mississippi use literacy coaches to provide professional development of literacy skills to improve student outcomes. The International Reading Association (IRA, 2006) published directions of the duties for the literacy coaches. The IRA's recommendations:

- professional development for specified needs of the school
- demonstrating instructional practices
- validating instructional practices by observing
- ensuring the teacher has adequate resources
- providing the school/teacher with updated research findings
- guiding in developing lessons (IRA, 2006, p. 17).

The Mississippi Legislators and school leaders have recognized the significance of literacy coaches and how they can benefit the learning process with ongoing professional development and assisting the classroom teacher for student growth. Professional development when job embedded and ongoing by literacy coaches is effective (Stephens et al., 2011). According to Richard (2003), the most efficient method of providing teachers professional development is while teachers are on the job and on the work site to classroom to improve instruction.

Peer coaching develops the concept of a self-help community that builds on objectives, connectivity, peer examination of methods, and immediate evaluation of the instruction (Joyce & Showers, 2002). Peer coaching allows the teachers to coach one another in discussing instructional goals and lesson plans. The peer coaching model

positively affects trainees toward gaining new teaching practices and skills (Kohler et al., 1997; Joyce & Showers, 2002).

In her examination of the reading specialist's evolving role, Dole (2004) compared literacy coaches to mentors, focused on their role as mentors for teachers, and added that reading coaches meet essential professional development needs. In fulfilling the mentoring role, reading coaches demonstrate and provide teaching opportunities for participants to practice lessons. The classroom teacher receives feedback from the reading coach for support as well as suggestions for improvement.

Sweeney (2003) the goal of providing instructional coaches in the school is to improve the adult learning of the teachers' specific skills and to provide continuity throughout the school. Bean and Zigmond (2006) recognized that the leaders and teachers that work in a school with a literacy coach have the opportunity to receive ongoing training. These researchers have depicted the literacy coach as the network between the school and state literacy programs. When the teacher introduces new skills, the literacy coach assists with the lesson and models lessons for the teacher who needs additional assistance. Bean et al. (2008) content literacy coaches can assist in improved student achievement.

Preservice Professional Development

Several studies have shown the impact of reading practices and instructional knowledge. According to Duffy (2004), the teachers' ability to provide effective student learning outcomes depends on the teachers' knowledge. Research has examined teacher knowledge of reading on the teachers' motivation to read regarding student learning

(Coleman, 1966; Flippo, 2001). Edmonds and Bausermann (2006) discovered that teachers influence the amount that their students read.

Preservice teaching prepares the beginning teacher for the demands of working with a group of teachers and students Groundwater & Smith (1992). Preservice teachers typically adopt their teachers' methods when in school and suggest that they observe different teachers develop teaching methods (Comeaux, 1991, p.162).

When preparing teachers for teaching reading the knowledge of the subject matter is essential to student growth in reading (Cunningham et al., 2009). Implementing instructional methods, best practices, reading standards, and literacy skills are essential to student outcomes (Griffith & Lacina, 2017; InTASC, 2011).

Research shows the need for teachers to know the essential foundation skills of literacy (Moats, 2009).

Moats (1999), states a core curriculum for teacher preparation includes:

- Understanding knowledge of reading psychology and development;
- Understanding knowledge of language structure that is the content of instruction;
- Applying best practices in all aspects of reading instruction; and,
- Using validated, reliable, efficient assessments to inform classroom teaching

(Moats, 1999, p.14).

The following are seven standards prepared by the International Literacy Association's Standards to prepare literacy professionals. (International Literacy Association, 2017).

- Standard 1, Foundational Literacy Knowledge, includes: A major difference in Standards 1 a broader view of reading and writing from a limited view
- Standard 2, Curriculum and Instruction: Reflect the move from reading to literacy emphasizing foundation knowledge of the curriculum and instructional methods.
- Standard 3, Assessment and Evaluation: Guides in assessing and evaluating instructional methods and analyzing data with colleagues.
- Standard 4, Diversity and Equity: Expands the teachers' knowledge to teach literacy and work with colleagues collaboratively.
- Standard 5, Learners and the Literacy Environment: Ensuring the needs of the learners, namely digital literacy.
- Standard 6, Professional Learning and Leadership: The focus on this standard demonstrates of being lifelong learners in professional development.
- Standard 7, Practical & Clinical Experiences: The candidates apply best practice in practicum experiences. (International Literacy Association, 2017).

Preservice teachers who are preparing to teach reading should acquire knowledge in foundational literacy skills to teach literacy. Preservice teachers must use foundational literacy skills to perform their instructional strategies (Nierstheimer et al., 2000).

According to Hurford (2016), “alarmingly, a great many of the colleges of education provided minimal to no training in the science of reading” (p. 8).

Mississippi's Literacy-Based Promotion Act

Mississippi has had a problem with illiteracy, posting some of the nation's lowest test scores. For example, (Abrokwa et al., 2010) emphasized that Mississippi reported having among the country's worst literacy rates. The state's average score for the fourth grade from 1992 through 2007 scored below the basic level on the reading assessment administered by the National Assessment of Educational Progress. The fourth-grade reading scores from the NAEP, until 2007 reported that more than half of the fourth graders scored below basic (Folsom et al., 2017). The state NAEP scores remained close to the same until 2003. Reading scores in basic or above went to 74%. The 1998 NAEP score percentage scoring at basic or above had been 73%. In 2013, the Mississippi reading scores on the NAEP were 13 points lower than the states' average across the nation in reading in the eighth grade (Bandeira, M. et al., 2015). The Mississippi's fourth-grade scores in 2019 on the NAEP improved, and no other state in the nation showed improvement.

In 2013 the Mississippi legislature took action to legislate the Literacy-Based Promotion Act. This legislation mandates schools make reading skills a priority on grade level in grades K-3. During 2014-2015, third-grade students who scored in the state assessment's minimal range will repeat the third grade. Third-grade students must score above the minimal level on the state reading assessment to advance to the fourth grade unless the school can prove a good cause exemption (Mississippi State Department of Education, 2013). The Legislature amended the Literacy-Based Promotion Act in 2016 to add Individual Reading Plan (IRP) starting in 2018-2019 (Folsom, 2017).

The main element of the Literacy-Based Promotion Act is that students in the third grade are required to meet the score of level 3 or above within the range of levels 1-5 on the third grade MAAP-ELA and as established by the Mississippi Department of Education (Folsom, 2017). Third-graders receive three opportunities to obtain a passing score before they are retained (MDE, 2013). Third-grade classes are assessed with the Mississippi Academic Assessment Program English Language Arts exam in April of the current school year. Approximately 30 days after the first retest, the students take the second test. When the students take the second alternative assessment, they can retake the assessment twice in the summer, and if the student still does not pass the student will repeat the third grade (www.mdek12.org). The students who do not have a score over the passing threshold on the alternative state-wide assessment have two additional attempts to retest during June and July (www.mdek12.org/literacy). After three attempts, students who fail the test are retained in third grade and provided intensive reading intervention and support (MDE, 2013). Mississippi has struggled to improve reading scores. Students across Mississippi have progressed through the school system and have not developed functional literacy in the early grades. The lack of functional literacy skills produces a high drop-out rate and low achievement scores in later grades (ExcelinEd, 2019). A national study in 2007 of American fourth-graders showed that students scored 65% at or above basic levels of literacy, with 31% achieving proficient or above levels (Abrokwa et al., 2010). However, 51% of Mississippi's fourth graders ranked in the basic level on the MAAP state assessment (Lee et al., 2007).

The Barksdale Reading Institute (2016) studied 23 Mississippi sites that preparation programs for teachers at 15 college of education and discovered the programs

unsuccessful providing their students with reading instructional strategies (Barksdale Reading Institute, 2016). Also, the study discovered that strategies taught to new teachers were not research-based. Mississippi educators were not consistent with literacy instruction and varied dramatically in effectively teaching reading instruction (Barksdale Reading Institute, 2016). The Mississippi Literacy-Based Promotion Act targets reading and improve students' reading levels with the Individual Reading Plans and interventions (Stamm, 2014). The learning curve widens tremendously from the time students start kindergarten until third grade to take the reading assessment (Stamm, 2014). ExcelinEd, working with RMC Research Corporation, examined the Mississippi Literacy-Based Promotion Act (LBPA) for the impression of educators since the fourth grade, NAEP reading scores have increased. The reading scores have moved Mississippi to second in the nation for learning gains.

Mississippi's K-3 Early Literacy Professional Development Initiative

The Mississippi Department of Education and public schools of Mississippi have the task of ensuring third-grade students are reading on grade level at year's end. The Mississippi Department of Education answered the legislation Literacy-Based Promotion Act by developing a K-3 early literacy skills training and adding the component of coaches and teachers using a collaborative effort to teach literacy. As part of the Mississippi's K-3 Early Literacy Professional Development Initiative, the early literacy professional development, *Language Essentials for Teachers of Reading and Spelling (LETRS)* was included with focus on instructional training. Teachers complete certified training using a combination of eight modules divided into two phases and face-to-face training after completion of a phase module over five years. The two phases include

virtual coursework to be completed within six weeks and a one-day in-person workshop. The professional development topics covered are early literacy skills with a strong emphasis on word study.

MDE selected schools with the most significant schools with students reading below grade level on MAAP in the primary grades. The Department mandated training of *Language Essentials for Teachers of Reading and Spelling* within targeted schools. MDE also provided literacy coaches to these schools to help teachers improve their instruction. The coaches assisted each assigned school for approximately two to three days per week.

MDE in 2019-2020 school year launched a new version of the literacy program *LETRS* 3rd Edition. The LETRS training provides practical classroom strategies for teaching early literacy skills to students from special education students to high achieving students. The educators complete an online pre-test covering literacy skills, complete four online professional development modules, and attend a one-day, face-to-face training with a LETRS trained presenter. After MDE enrolls the educator in the last four online modules, the educator attends a one-day face-to-face training with a LETRS trained presenter and subsequently completes an online post-test.

LETRS training is a two-year course with a theoretical foundation for screening students to identify skills instruction, a strong phonology presence, and assessments. The second-year content includes a focus on teaching vocabulary, writing, and language and reading comprehension. LETRS provides flexibility and a blended version course-of-study with embedded videos, online assignments, and interactive exercises. LETRS helps the educator to become proficient in teaching the intricate literacy skills required to achieve success with all students.

Teacher Knowledge of Early Literacy Skills (TKELS) Survey

The Regional Educational Laboratory Southeast (REL) provided two survey instruments, the Teacher Knowledge of Early Literacy Skills (TKELS) survey and the Coach's Classroom Observation Tool (CCOT) for the Mississippi Department of Education (Folsom et al., 2017). The TKELS survey included 31 questions on literacy skill knowledge and application (Folsom et al., 2017). The survey results plus the literacy coaches assessment of teachers using the CCOT led to a study of changes in the knowledge of educators who teach early literacy skills and their classroom practices brought about in response to the professional development and coaching (Folsom et al., 2017).

The Educator Outcomes Associated with Implementation of Mississippi's K-3 Early Literacy Professional Development Initiative looked at teachers' comprehension of literacy skills and the validity of instruction practices during the spring semester of 2014 and the fall semester of 2015 (Folsom et al., 2017).

The Educators Outcomes Associated with Implementation of Mississippi's K-3 Literacy Professional Development Initiative study had two parts when collecting data. The first part included gathering data on teachers' improvement in the knowledge of instructional strategies, also the type changes if they occurred. The second part of the study examined the teacher's proficiency because of the LETRS professional development (Folsom et al., 2017). Data points were collected using the TKELS survey and the CCOT. The three categories for the data were:

- Not started: Educators had not started the online courses or attended the one-day workshop.

- In progress: Educators had initiated one of the units.
- Complete: Educator had finished the online units and also the workshops (Folsom et al., 2017).

The study provided a measure of growth for each outcome, not started the program, in progress, and completed training, and examined the growth and progress of completion, the data were combined (Folsom et al., 2017).

The study revealed:

- Educators' knowledge improved by 48 percent on the CCOT, and the TKELS survey data reflected a 59 percent change in knowledge. Teachers not included in the training had a lower growth of knowledge.
- The improvement in instruction grew from 31 percent to 58 percent, student engagement increased by 16 percent, and teacher competencies grew by 14 percent. Teachers not included in the training did not show growth in the measures of the study (Folsom et al., 2017).

The Influence of COVID-19 on Student Learning

Within a matter of days in March 2020, schools across the United States and worldwide changed instructional practices when the COVID-19 pandemic disrupted schools and forced change to occur in the classroom setting. In Mississippi, school districts scrambled to develop and implement plans to keep some form of learning alive. When the shutdown of schools began, school districts began to look at alternate methods to keep learning alive. School districts rich in technology distributed laptops and chrome books for online learning; districts without sufficient technology distributed learning

packets. In order to obtain the packets provided by schools to students as a form of learning tool, parents had to drive to schools. Hence, teaching instruction has shifted and created different experiences in learning for the learner, teachers, and parents. In order to serve their students, school districts have provided options for the education of students concerning attendance, which have ranged from face-to-face, online, and hybrid. Educators and district leaders have faced many barriers when implementing online, synchronous, or asynchronous learning environments, such as internet accessibility, affordability, and the lack of classroom socialization.

The pandemic created the almost instantaneous moves to remote teaching and created a new challenge for teachers with a shift in instruction. This shift has created different experiences in learning for the learner, teachers, and parents. The acceptable practices of good teaching should remain the teachers' focus as they make adjustments to fit the virtual platform (Cates, 2020). However, a study by Aragon et al. in 2001 that looked at learning styles using face-to-face or online environments showed no differences in engagement, and motivation is the main factor in the learning outcome.

Teachers and parents must partner together to provide the best online learning outcomes. Because the virtual online platform limits the ability to provide materials when the teacher presents a new objective, the teacher will need to solicit parents to assist their children in understanding the subject matter. Also, when a student is experiencing difficulties, the parent may need to assist the child. One challenge is that parents mostly own support hardware, such as cellular phones or laptops, and now share with their children. Online learning presents many challenges. Those challenges range from computer access, technical problems, connectivity, and learning materials to the student's

surroundings. These challenges inhibit learning outcomes. Moreover, these obstacles in the path can prohibit student assignment completion, resulting in students falling behind in the achievement of necessary skills.

In the end, the key to providing adequate instruction at the school and classroom levels will depend on whether teachers grow in early literacy skills, a deep understanding of the skills, and teachers receive support with the tools to provide a good education. (Solari, 2020).

Summary

Early literacy is the cornerstone of education. The necessary skills and developmental aspects of a child's early literacy strategies will directly link to a teacher's understanding of phonemic awareness, literacy strategies, content knowledge, and research-based instructional tools. Teachers must guide in developing students' early literacy skills by implementing instructional methods proven to promote literacy, fluency, and comprehension; ensuring that teachers prepare adequately and effectively to teach and develop their skills through instructional training and ongoing professional development is vital. Professional development assistance requires a structure that meets the differentiated needs of the each student and individual teachers as well.

Effective literacy instruction programs demonstrate many characteristics such as depth of knowledge, a deep understanding of language, instruction on applying literacy skills to instruction, and utilization of assessment tools to analyze the learning needs of the students. In contrast, a Barksdale Reading Institute study on teacher preparation programs discovered that the programs failed to prepare teachers in reading instruction adequately. The study found that the programs used to develop early literacy instruction

were not research-based and did not demonstrate effective literacy instruction. Through Mississippi Early Literacy initiatives, such as the 2013 Literacy-Based Promotion Act, a strong emphasis has been placed on developing teachers' skills using the professional development training of Language Essentials for Teachers of Reading and Spelling, LETRS. Early literacy skills in the classroom among kindergarten through third-grade students have significantly increased with research-based instructional methods. Using survey, TKELS (Teacher Knowledge of Early Literacy Skills), the effectiveness of LETRS training has demonstrated growth in instructional strategies, student outcomes, and teacher best practices (Folsom et al., 2017). When planning professional development programs for early literacy, teachers must show growth in subject matter knowledge of content instruction and instructional methods to promote grade-level reading fluency and comprehension, particularly in kindergarten through third grade. Given the necessity of quality literacy instruction, the LETRS professional development training gives teachers a methodological approach that provides practical classroom strategies, subject matter knowledge, and tools to teach language and literacy skills to meet each student at his or her levels and foster growth in achievement.

CHAPTER III- METHODOLOGY

This quantitative descriptive study aimed to appraise the beliefs of Mississippi teachers who had taken the LETRS training. The study included general demographic information, such as position held, years of teaching experience, teaching tested or non-tested subject and grade, highest degree earned, and instructional delivery mode (in-person, online-only, or hybrid). This study focuses on examining of teacher beliefs toward changes in phonics literacy instructional practices and student learning outcomes after having received LETRS training. This study also considered whether teachers believe COVID-19 is an influence on their attitude toward positive learning outcomes. The study aimed to understand the beliefs held by educators concerning the LETRS training to inform the use of LETRS for future early literacy professional development. This chapter contains a description of survey participants, research design, instrumentation, procedures used for gathering data, and analysis.

Research Design

This study examined teacher beliefs of early literacy skills instruction after receiving LETRS 3rd edition professional development training from the 2019 fall semester and the 2020 fall. The data from the survey describes educators' beliefs about the implementation of the professional development Language Essentials for Teachers of Reading and Spelling (LETRS). The research design examines if there were relationships among principals' beliefs, literacy coaches, and teachers regarding the Language Essentials for Teachers of Reading and Spelling (LETRS) and literacy instructional practices; and student outcomes,; and remote learning of student literacy skills.

Demographic data included the years of teaching experience, the number of students taught weekly, current position, highest degree earned, the teaching of a tested subject or grade, mode of instructional delivery (teach in-person, online-only, or hybrid), the barrier of technology, parental support for remote literacy skills, and the in-person teaching of phonics. The participants' demographic data were collected when they completed the survey instrument.

Participants

Mississippi Department of Education plans and schedules the LETRS professional development. Participants register for the LETRS training using the MSRESA registration system. There is no selection process for participants. Voyager Sopris Learning provides the pre-test to test prior knowledge of literacy skills and permits participants to begin the online units. Participants must complete the first unit and test on a given unit before moving to the next unit. The participant must complete all four units before they register for the one-day, face-to-face training. Voyager Sopris Learning provides a professionally trained trainer to present the face-to-face training of LETRS. This study included Mississippi teachers, literacy coaches, school administrators, and preservice teachers from universities as participants from across the state. Teachers registered for the LETRS training and attended the face-to-face training. Participants' names remained unknown to the investigator in this study. The participants completed the training during the 2019-2020 school year.

Instrumentation

To develop the survey, Qualtrics Survey Software was used to develop, the instrument, Language Essentials for Teacher of Reading and Spelling Survey, and administered to educators. The Likert-scale survey contained 29 questions designed to gather quantitative data related to teacher beliefs about LETRS. Participants responded through a five-point Likert scale ranging from *Strongly Disagree* to *Strongly Agree* with an option of *Neither Agree nor Disagree*.

Three educators provided a review of the online survey to examine the validity and content. A panel of three included one school administrator with twenty-three years of experience in Educational Administration. The second-panel expert is a district-level curriculum director with a Ph.D. in Educational Administration and served on the Learning Forward Mississippi Board of Directors, a professional development association. The third member on the panel is an elementary language arts teacher with a specialist degree in Elementary Education. The panel of experts found that two questions in the survey had Likert scale items in a reversed order, and therefore it could be incorrectly marked if the scale did not follow the same pattern. Based on that feedback, the Likert scales were revised to follow the same order throughout the survey.

The Language Essentials for Teachers of Reading and Spelling Survey instrument contains three sections (see Appendix C). The survey items 1-6 collected the demographic data from the teachers who responded. The variables used for this study were grade currently teaching, the range of students taught weekly, years of teaching

experience, the highest degree earned, and whether the teacher was teaching a tested subject or grade included in Mississippi. Questions 7-10 were designed to measure remote learning effects of student learning outcomes, and questions 11- 18 were designed to measure the teachers' beliefs of the change in their literacy instructional practices after the LETRS training. Question 19 measured teachers' beliefs about LETRS professional development and whether it changed student learning outcomes.

A pilot study was conducted to determine the reliability after obtaining Institutional Review Board approval. The pilot study consisted of 48 teachers selected from a Language Essentials for Teachers of Reading and Spelling participants database to receive the electronic link to the study's letter of intent and the survey. The pilot study data were entered into the SPSS statistical program to determine reliability.

The pilot study received 18 electronic responses for analysis to determine the internal consistency reliability of the survey by Cronbach alpha. Cronbach's Alpha was used to measure the pilot survey, which had internal consistency reliability of .831. Thus, the researcher proceeded with surveying teachers who had participated in Language Essentials for Teachers of Reading and Spelling (LETRS) training during the spring semester, 2019, through the fall semester, 2020.

Procedures

The Language Essentials for Teachers of Reading and Spelling Survey was created in electronic form using the Qualtrics Survey Software online survey tool and subsequently disseminated to educators from kindergarten through fifth grade in Mississippi who had taken LETRS professional development training of modules 1-8 between spring semester, 2019, and fall semester, 2020. A letter was sent to district

superintendents requesting that their teachers participate in a survey of teachers in their districts who had taken the LETRS professional development, Modules 1- 8 (see Appendix A). After receiving the Institutional Review Board approval (see Appendix D), participants of LETRS training received an email with a letter explaining the study, a copy of the consent letter (see Appendix B), and the survey (Appendix C) with an electronic link to the survey. The survey responses were collected for ten days along with three follow-up emails which were sent to encourage participation in the survey to increase the sample size. The online survey tool tallied the results of the questionnaire. When the time frame for data collection expired, the data was retrieved for data analysis. Mississippi teachers and Mississippi university preservice teachers who registered for the Language Essentials for Teachers of Reading and Spelling (LETRS) were participants in the study.

Data Analysis

The SPSS statistical software was used to build a file for data and responses to the survey; the data were then analyzed using descriptive statistics to determine each item's rating on the survey. The hypotheses of this study were tested using a non-parametric analysis of variance. Spearman rho correlation coefficient was utilized to test the hypotheses and a p-value of $p < .01$ was used. Spearman rho was used to determine a significant correlation between LETRS units completed, LETRS professional development and literacy instructional practices, student learning outcomes, and remote online learning outcomes. The Independent Sample t-test was used to examine significant difference in the attitudes of the face-to-face group with a positive attitude compared to the face-to-face group with a critical attitude toward students learning outcomes.

Limitations

This study was limited to Mississippi public school educators who completed a Language Essentials for Teachers of Reading and Spelling (LETRS) unit during the spring semester, 2019, through the fall semester, 2020. Small group size is the reason for obtaining statistical significance.

The COVID-19 virus brought about many challenges for teachers, placing obstacles and changing types of teaching assignments. The participants of received an email with the Language Essentials for Teachers of Reading and Spelling (LETRS) Survey, and reminders were sent to the participants four different times; however, teachers had extra teaching duties and responsibilities resulting from the COVID-19 pandemic during the school year of the study.

CHAPTER IV- RESULTS

Presented in this chapter is the researchers' results of the quantitative study which examined data collected to determine the beliefs teachers have about LETRS professional development on literacy instructional practices, student learning outcomes, and the use of technology to provide literacy instruction. Approximately 750 electronic questionnaires were distributed to educators across the state of Mississippi. Of the 750 surveys, 78 were accepted, with a rate of 10%. To be described in this chapter is the descriptive and statistical results from analyses of data collected during the study.

Descriptive Information

The demographic data from the survey was collected from 78 respondents. The data requested from teachers was: grade range, current grade teaching, years for teaching experience; students taught weekly; highest degree earned; subject area being taught; teaching a grade being tested; mode of instructional delivery for 2020-2021 (in-person, online-only, or hybrid); additional literacy professional development other than LETRS attended (additional literacy training); and, frequency of use of information presented in LETRS training for literacy instruction (frequency use of LETRS training). Because of missing values, the sample size was reduced to 59 respondents.

First, demographic data were descriptively analyzed, which yielded mixed results (see Table 1). The highest percentages of respondents were in these categories, for grade taught, ordered from highest to lowest: other (28.2%), third grade, first grade, and second grade. Further, the respondents reported 11 -15 years of teaching experience (24.4%) were the larger group. The majority of the participants taught 0-18 students weekly (34.6%), and respondents with bachelors' degrees were the most prominent education

level category (37.2%). Participants teaching a test subject were equivalent, 50% teaching in a tested grade and 50% not teaching a tested subject. The majority of respondents had attended eight units of LETRS professional development (33.3%). Those with four or more units of additional literacy training were the highest percentage of respondents in the corresponding category (37.2%). The majority of respondents reported using the information presented in LETRS training daily for literacy instruction (51.3%). The survey respondents were teaching in-person (48.7 %), and hybrid was near that level (46.2).

Table 1. Frequencies and Percentages of Demographic Variable

Variable	Frequency	Percentage
<hr/>		
Grade		
Kindergarten	5	6.4
1 st	13	16.7
2 nd	12	15.4
3 rd	15	19.2
4 th	4	5.1
5 th	3	3.8
Literacy Coach	8	10.3
Other	22	28.2
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Table 1 (continued)

Variable	Frequency	Percentage
Experience		
0 - 2 years	5	6.4
3 - 6 years	11	14.1
7 - 10 years	15	19.2
11 - 15 years	19	24.4
16 - 20 years	12	15.4
21 + years	16	20.5
Students Taught Literacy		
0 - 18	27	34.6
19 - 24	18	23.1
25 - 32	16	20.5
33 - 40	5	6.4
41 - 56	3	3.8
57 +	8	10.3
Degree		
Bachelors	29	37.2
Masters	21	26.9
Specialist	20	25.6
Subject Tested		
Yes	39	50.0
No	39	50.0

Table 1 (continued)

Variable	Frequency	Percentage
Grade Tested		
Yes	43	55.1
No	35	44.9
Teaching		
In - Person	8	40.0
Online	3	15.0
Hybrid	9	45.0
LETRS Units Attended		
None	2	2.6
Unit 1	12	17.9
Unit 2	3	3.8
Unit 3	8	10.3
Unit 4	12	15.4
Unit 5	7	9.0
Unit 6	5	6.4
Unit 7	3	3.8
Unit 8	26	33.3

Table 1 (continued)

Variable	Frequency	Percentage
Additional Literacy Training		
1	20	25.6
2	19	24.4
3	8	10.3
4+	29	37.2
Frequency Use of LETRS Literacy Training		
Daily	40	51.3
4 - 6 Times a Week	6	7.8
2 - 3 Times a Week	20	26.0
Once a Week	9	11.7
Never	2	2.6

The survey instrument measured participants' perceptions of the influence of LETRS on their attitudes toward student learning outcomes. A Likert scale was used with a five-point range starting with Strongly Disagree to Strongly Agree with an additional choice Neither Agree nor Disagree was used to determine the descriptive. For example, information was calculated for this statement: Face-to-face is essential when teaching phonics (mean, 4.58) (see Table 2).

Table 2. Descriptive Statistics for Remote Learning of Student Learning Outcomes

Statement	N	Mean	Std. Dev.
Face-to-face is very important when teaching phonics.	78	4.58	.97

Scale: 5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree

The survey instrument contained five statements designed to measure participants' perception of LETRS professional development and changes in phonics literacy teaching practices (see Table 3). The means and standard deviation were calculated using a Likert scale ranging from *Strongly Disagree* to *Strongly Agree* with the option of *Neither Agree nor Disagree* for each statement. The mean of 4.43 was the highest and was for statement 18: LETRS professional development improved knowledge of literacy instruction. The lowest mean was 2.05 for statement 14, which also had the highest standard deviation (1.22).

Table 3. Descriptive Statistics for LETRS Phonics Literacy Instructional Practices

Statement	N	Mean	Std. Dev.
14. Used the information presented in LETRS professional development.	77	2.05	1.22
18.1. LETRS professional development improved my knowledge of literacy instruction.	58	4.43	1.08

Table 3 (continued)

Statement	N	Mean	Std. Dev.
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18.2. LETRS professional development improved my skills in literacy instruction.	58	4.40	1.02
18.3. LETRS professional development had an impact on my daily classroom instruction	56	4.23	1.11
18.4. LETRS professional development fostered a climate of instructional improvement.	56	4.36	1.03

Scale: 5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree

The three statements in table 4 of the survey instrument were designed to measure participants' perceptions of the LETRS training on student learning outcomes (see Table 4). The Likert scale of *Strongly Disagree* to *Strongly Agree* with the choice of *Neither Agree nor Disagree*. Means and standard deviations were calculated. Statement 19.2 showed the highest mean of the three statements (3.88) and the largest standard deviation (1.273). Statement 19.1 had the lowest mean (3.80).

Table 4. Descriptive Statistics for LETRS Student Learning Outcomes

Statement	N	Mean	Std. Dev.
19.1. Since attending LETRS training student achievement has improved.	74	3.80	1.23

Table 4 (continued)

19.2. Since attending LETRS training student literacy skills have been enhanced.	75	3.88	1.27
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19.3. Since attending LETRS
I have observed changes in the
literacy skills of my students.

74

3.86

1.25

Scale: 5 = Strongly agree, 4 = Somewhat agree, 3 = Neither agree nor disagree, 2 = Somewhat disagree, 1 = Strongly disagree

Statistical Results

Data were collected through an electronic questionnaire which was dispersed to participants across the state of Mississippi who had registered for Language Essentials for Teacher Reading and Spelling (LETRS) training, Modules 1-8. A bivariate correlation analysis with Spearman's rho tested a statistically significant relationship between independent and dependent variables with each research question and its corresponding hypotheses analyzed. The first research question explored to what extent teachers perceived LETRS had changed their phonics literacy instructional practices. The following five hypotheses and results corresponded with research question one.

H1: *There is a significant relationship between the teachers' perception that LETRS professional development improved knowledge in literacy instruction and the number of LETRS training modules teachers attended.* Spearman's rho correlation ($r_s(58) = .209$) indicated a weak significant relationship, and the correlation was positive (see Table 5).

H2: *There is a significant relationship between the teachers' perception that LETRS professional development improved skills in literacy instruction and the number of LETRS training modules teachers attended.*

Spearman's rho correlation of ($r_s(58) = .226$) showed a weak positive correlation which was not statistically significant for educators' beliefs about improved literacy skills and the number of LETRS training *modules* teachers attended.

H3: *There is a significant relationship between the teachers' perception that LETRS professional development has an impact on daily classroom instruction and the number of LETRS training teachers attended.*

There was a weak positive correlation of ($r_s(58) = .224$) between the perception of LETRS training impacts daily classroom instruction and the number of LETRS training teachers attended. It was not statistically significant.

H4: *There is a significant relationship between the teachers' perception of LETRS professional development fostered a climate of instructional improvement and the number of LETRS training teachers attended.*

The belief of LETRS professional development fosters a climate of instructional improvement showed no correlation and was not significant ($r_s(56) = .077$). In terms of instructional improvement, results revealed a correlation between teachers' perceived beliefs about the changes in their phonics literacy instructional practices and the number of LETRS training teachers attended.

H5: *There is a significant relationship between the frequency of using the information presented in LETRS training, and the number of training modules teachers attended and the number of training teachers attended.*

The Spearman's rho correlation ($r_s(58) = .196$) indicated a weak significant relationship, but the correlation was positive.

Table 5. Number of Units Teachers Attended the LETRS Training

Number of LETRS Training Attended	Correlation Coefficient	Sig.(2-tailed)		
		<i>r</i>	<i>p</i>	N
Spearman's rho	Numbers of LETRS Attended	1.00		59
	Improved Knowledge Of Literacy Instruction	.209	.116	58
	Improved Skills in Literacy Instruction	.226	.087	58
	LETRS had an Impact On My Daily Classroom Instruction	.224	.097	56
	LETRS Training Fostered A Climate of Instructional Improvement	.077	.572	56
	Frequency of using the Information Presented In LETRS training	.196	.141	58

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

The research question two explores to what extent teachers perceived of LETRS training changed student learning outcomes. The following six hypotheses and results corresponded with research question 2 (see Table 6).

H1: *There is a significant relationship between the beliefs that student achievement improved with the number of LETRS training teachers attended.*

Spearman's rho was used to analyze the relationship between the teachers' perception that student achievement improved with the number of LETRS training teachers attended. There was no significant correlation between the two, though there was a negative relationship ($r_s(55) = -.139$).

H2: There is a significant relationship between the belief that students learning of literacy skills has been enhanced, and the number of LETRS training teachers attended.

The results revealed no relationship between the belief that students learning of literacy skills is enhanced with the number of LETRS training attended and no correlation.

H3: There is a significant relationship between observed changes in the students' literacy skills and number of LETRS training teachers attended.

Spearman's rho revealed no statistical significance and a very weak negative relationship between the variables, the number of LETRS training attended, and observed changes in students' literacy skills ($r_s(56) = -.172$).

H4: There is a significant relationship between the positive teacher observed results from LETRS training and the number of LETRS training teachers attended.

Results for Spearman's rho revealed a positive but not a significant relationship between teachers observing positive results from LETRS training and the number of LETRS training attended by teachers ($r_s(56) = .244$).

H5: There is a significant relationship between the observed classroom assessments' positive results from LETRS training and the number of LETRS training teachers attended.

The Spearman's rho correlation coefficient was not significant but was positive between classroom assessments and the number of training teachers attended ($r_s(56) = .222$).

H6: *There is a significant relationship between the belief that students have been positively impacted by LETRS training and the number of LETRS training teachers attended.*

The overall belief that students have been positively impacted by LETRS and the number of LETRS training attended by teachers was a positive but weak relationship that was not significant ($r_s(56) = .220$).

Table 6. Number of LETRS Training Teachers Attended and Student Learning Outcomes

Statement	Number of LETRS Training Teachers Attended		
	Correlation Coefficient <i>r</i>	Sig.(2-tailed) <i>p</i>	N
Spearman's rho			
Since attending LETRS training student achievement has improved.	-.139	.313	55
Since attending LETRS training student learning of literacy skills have been enhanced.	-.096	.484	56

Table 6 (continued)

Statement	Number of LETRS Training Teachers Attended		
	Correlation Coefficient <i>r</i>	Sig.(2-tailed) <i>p</i>	N
Since attending LETRS training I have observed changes in the literacy skills of my students.	-.172	.204	56
Informal classroom observations show positive results from LETRS training	.244	.070	56
Informal classroom assessments show positive results from LETRS training	.222	.104	56
Overall, I believe students have been positively impacted from LETRS training	.220	.104	56

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

Questions 17 and 19 in the survey were combined to make a new variable, student improvement, in order to explore the relationship with the independent variable of the number of LETRS training teachers attended, ($r_s(57) = .260$) (see Table 7).

Table 7. Informal Classroom Observation of Overall Student Improvement

Statement	Number of LETRS Training Teachers Attended		
	Correlation Coefficient <i>r</i>	Sig.(2-tailed) <i>p</i>	N
Spearman's rho			
Student Improvement	.260	.051	57

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

In this analysis, the teachers' perception was measured using their perception of the face-to-face importance of teaching phonics. The student learning outcome was measured using the following dependent variables: student achievement has improved, student learning of literacy skills has been enhanced, and changes have been observed in students' literacy skills.

Results showed informal classroom observations show a weak positive correlation from LETRS training, classroom assessments show positive results, and students have been positively impacted from LETRS training overall. However, the results were very close to significant. The six dependent variables combined into informal classroom observations variable for survey question 17 showed positive results from LETRS training. Classroom assessments showed positive results from LETRS training for "Overall, I believe my students have been positively impacted from LETRS training," with the dependent variables from question 19. Question 19 included these items: (Since attending LETRS training) Student achievement has improved, student learning of literacy skills has been enhanced, and I have observed changes in the literacy skills of my students. These items were used to form a new variable entitled, Teachers' Attitudes

about Student Outcomes. Response categories of *Strongly Disagree* and *Somewhat Disagree* were collapsed into *Disagree*. Response categories of *Somewhat Agree* and *Strongly Agree* collapsed into *Agree*. When running the statistical analysis, the response category of *Neither Agree nor Disagree* was omitted from the statistical analysis. The two new categories created were *Agree* and *Disagree*. Teachers' attitudes about student outcomes were then analyzed using an Independent Samples *t*-test to determine if a statistically significant difference existed between the two response groups for the importance of face-to-face teaching.

Research Question 3: To what extent do teachers perceive COVID-19 as an influence on their attitude toward student positive learning outcomes?

H1: *There is a significant relationship in teachers' perceived belief of the COVID-19 influence on face-to-face teaching of phonics.*

For the belief in which face-to-face is very important when teaching phonics, the face-to-face Disagree group reported to have a less positive attitude ($M=3.03$, $SD = 1.76$) than the Agree group ($M=3.95$, $SD = .87$) (see Table 8). The Independent Samples *t*-test did not any significance, therefore there was not a significant difference between face-to-face teaching phonics and the groups' attitudes toward student learning outcomes. Teachers who reported the belief in which face-to-face is very important had higher attitudes about student outcomes when compared to teachers who disagreed with face-to-face importance.

Table 8. Face-to-face Teaching of Phonics Descriptive Statistics

Q10. Face-to-face teaching phonics	Mean	St. Dev.	Std. Error mean	N
Attitudes about student outcomes				
Disagree	3.033	1.76	.791	5
Agree	3.959	.87	.119	52

Summary

The results of the data analyses for this quantitative study is presented in this chapter. The data analysis revealed no significant relationships between the variables. Language Essentials for Teachers of Reading and Spelling (LETRS) units of training the teacher attended, face-to-face teaching of phonics, and the participants' beliefs of the LETRS professional development improving student outcomes in literacy skills. The Spearman's rho correlation determined a significant positive association existed between improved knowledge of literacy instruction and improved skills in literacy instruction ($r_s(58) = .908, p < .01$). Thus, the results demonstrated teachers believe the training improved their knowledge and increased their belief in improved skills.

Discussion

In April 2013, the Mississippi Literacy-Based Promotion Act passed the legislature for students in third grade to be on grade level in reading at the end of the school. The Mississippi Department of Education (MDE) began implementing the Mississippi K-3 Literacy Initiative. The Mississippi K-3 Literacy Initiative's goal was to develop a K-3 early literacy skills training and add the component of coaches assist teachers in early literacy skills and increase knowledge of subject matter. In January of 2014, MDE initiated the professional development for K-3 teachers with the program Language Essentials for Teachers of Reading and Spelling (LETRS). LETRS includes a wide range of content which conveys the professional development topics of early literacy skills, emphasizing word study of effective reading instruction and writing, and classroom instruction. To improve literacy knowledge and teaching skills in early literacy, the Mississippi K-3 literacy Initiative offers professional development to in-service teachers at Mississippi universities, university professors of literacy, teachers, and literacy coaches. The state of Mississippi has invested tax dollars since 2014 in professional development to improve teachers' knowledge and improve the education of the children of Mississippi.

The study explored teachers' beliefs concerning the influence of LETRS training on literacy skills, student learning outcomes, and the COVID-19 influence on student outcomes. In general, the purpose of the study was to see if teachers believed that (LETRS) provided professional development improved teacher phonics and literacy knowledge to also improve teacher quality in the schools of Mississippi. This chapter will

discuss the research findings, conclusions, and limitations of the study and suggest future practice and research recommendations.

Summary of Procedures

The University of Southern Mississippi Institutional Review Board approved for the researcher to collect data for the research. Permission was requested from superintendents across Mississippi to survey the participant of the LETRS training. Educators who had participated in the LETRS training received an electronic survey by email during the spring semester of 2019 and fall semester of 2020. A total of 700 electronic surveys were distributed to participants with five total emails to encourage completion of the survey. A sum of 78 surveys was received from participants who responded voluntarily to the survey. Descriptive data were collected from the survey to evaluate the teachers who participated with statements about their beliefs of LETRS professional development changed teachers' literacy instructional practices and student learning outcomes and that COVID-19 influenced teachers' attitudes toward student positive learning outcomes (Appendix C). Cronbach's alpha was used to evaluate the survey used for analyzing data gathered from the survey. The 78 respondents' data to the survey were entered into SPSS to determine if the number of LETRS professional development training modules made a difference in teachers' beliefs statistically.

Conclusions

The demographic data collected from the respondents revolved consistently with the following: grade range of participants; the range of years of teaching experience; the number of students taught weekly; the highest degree earned; whether the teacher was teaching a tested subject or grade; and mode of instructional delivery for the teaching of

phonics (online-only, hybrid, or face-to-face). With regards to grade taught, the 'Other' was largest in responses (28.2%). For years of experience and highest degree, 20.5% indicated that they had 21 or more years of experience, and 37.3 % had a bachelors' degree. For personal instructional delivery mode in the 2020-2021 school year, 40 % of the teachers taught in person, online-only 15%, and hybrid 45%. For the number of LETRS units of training attended, the highest percentage of respondents attended eight training units (33.3%).

Research question one asked to what extent teachers perceive Language Essentials for Teaching Reading Spelling (LETRS) changed their phonics literacy instructional practices. The first hypothesis for research question one posed a significant relationship between the teachers' perception that LETRS professional development improved knowledge in literacy instructional and the number of LETRS training received. The analysis was made using a Spearman's rho correlation that showed a weak, significant relationship, and the correlation was positive that the number of LETRS units attended and their perception of improved knowledge. There was no statistically significant difference found, but 51.3 % used the LETRS literacy training daily, and 66 % strongly agreed that LETRS training improved literacy knowledge.

The second hypothesis for research question examined the significant relationship of the teachers' perception that LETRS professional development improved skills in literacy instruction and the number of LETRS training received. A weak positive correlation but not statistically significant; 61% strongly agreed that LETRS training impacted teachers' literacy skills instruction.

The third hypothesis for research question one explored a significant relationship between the teachers' perception that LETRS professional development impacted daily classroom instruction and the number of LETRS training received. The analysis by Spearman's rho showed a weak positive correlation but not statistically significant.

The fourth hypothesis for research question one showed a significant relationship between the teachers' perception that LETRS professional development fostered a climate of instructional improvement and the number of LETRS training teachers attended. The results from Spearman's rho revealed that there was no correlation, and it was not significant.

The Spearman correlation for research question one indicated a significant positive association between improved knowledge of literacy instruction and improved skills in literacy instruction. Thus, teachers believe the training improved their knowledge and increases their belief in improving literacy skills.

A questionnaire regarding teachers' knowledge of literacy skills only identified 68% of phonics instruction on the structure of language (Fielding-Barnsley & Purdie, 2005). Additionally, educators could correctly identify 22 percent of the phonemes (Spencer et al., 2008).

The Teacher Knowledge of Early Literacy Skills survey evaluated educator knowledge after LETRS training, which grew 11% from the 48th percentile to the 59th percentile (Folsom et al., 2017). The caliber of instruction in target schools grew by 27 percentage points after LETRS training.

Research question two asked, to what extent do teachers perceive Language Essentials for Teachers of Reading and Spelling (LETRS) training changed student

learning outcomes. The first hypothesis for research question two stated a significant relationship between the beliefs that student achievement improved with the number of LETRS training teachers attended. There was no significant correlation between the two, but there was a negative relationship.

The second hypothesis for research question two looked to determine if there was significant relationship between the perceived belief that student learning of literacy skills has been enhanced and the number of LETRS training teachers attended. Results revealed there was no relationship.

The third hypothesis for research question two posed a significant relationship between observed changes in students' literacy skills and the number of LETRS training teachers attended. The Spearman's rho results revealed no statistical significance and a very weak negative relationship between the variables.

The fourth hypothesis for research question two stated a significant relationship existed between observed positive results from LETRS training and the number of LETRS training teachers attended. The results revealed a positive relationship but not a significant relationship.

The fifth hypothesis for research question two posed a significant relationship between the observed classroom assessments' positive results from LETRS training and the number of LETRS training attended. The Spearman's rho correlation coefficient did not show a significance but showed a positive connection between classroom assessments and the number of training teachers attended.

The sixth hypothesis for research question two stated a significant relationship between the belief that students have been positively impacted by LETRS training and

the number of LETRS training teachers attended. The results from Spearman's rho analysis determined a positive but weak relationship that was not significant.

Questions 17 and 19 in the survey were combined to make a new variable, student improvement, to measure the independent variable, the number of LETRS training teachers attended. The teachers' perception was measured using their perception of the face-to-face importance of teaching phonics. The student learning outcome was measured using the following dependent variables: (Since attending LETRS training) student achievement has improved, student learning of literacy skills has been enhanced, and changes have been observed in students' literacy skills in informal classroom observations. This process resulted in a weak positive correlation from LETRS training with the belief of classroom assessments have shown positive results and overall, students have been positively impacted by LETRS training. Those results were very close to significant.

The six dependent variables of questions 17 and 19 were averaged and used to create the group, Teachers' Attitudes about Student Outcome. The categories *Strongly Disagree* and *Somewhat Disagree* blended into *Disagree* with the category *Neither Agree nor Disagree* was not used for statistical analysis. The categories *Somewhat Agree* and *Strongly Agree* blended into *Agree*. The two new groups created were *Agree* and *Disagree*, and teachers' attitudes about student outcome were analyzed using an Independent Samples *t*-test. The *t*-test examined the importance of face-to-face teaching of phonics and to determine if a statistically significant difference.

Research question three asked about the extent to which teachers perceive COVID-19 as an influence on their attitude toward student positive learning outcomes.

The hypothesis for research question three stated a significant relationship in teachers' perceived belief of the COVID-19 influence on face-to-face teaching of phonics. The face-to-face groups' results showed a less positive attitude than the respondents that believe face-to-face is critical when teaching phonics. The Independent Sample *t*-test was not significant, determining no significant between the two groups' attitudes toward students learning outcomes.

The study examined the data to investigate the correlation between teachers' perception of the effectiveness of the Language Essentials for Teachers of Reading and Spelling (LETRS) training regarding changes to their phonics literacy instructional practices, student learning outcomes, and the effect of COVID-19 on student learning outcomes. Data analyses revealed there was not a significant relationship between the independent variables and dependent variables.

The study reveals professional development in Mississippi has many promising components for improving literacy instruction and student outcomes. However, the number of LETRS units training teachers attended has no relationship to students' literacy skills. The most promising information derived from this study is that about 1/3 of the teachers completed all units of training. The finding also demonstrates that the investment in LETRS professional development impacts the knowledge and skills in literacy instruction in Mississippi impacting daily classroom instruction while fostering a climate of instructional improvement.

Limitations

The limitations present in the study are:

1. The people taking the survey were limited to Language Essentials for Teachers of Reading and Spelling participants during the spring semester 2019 and fall semester 2020.
2. The study measured participants' beliefs about an increase in knowledge of literacy instructional practices. The study did not assess the direct effectiveness of the LETRS professional development regarding the teachers' knowledge of literacy instruction and student outcomes.
3. The sample size was comparatively smaller when compared to other similar studies.
4. Only survey methodology was used.
5. The emergence of the COVID -19 pandemic had placed additional teaching responsibilities, increased use of technology; isolation and stress issues may have negatively influenced teachers' beliefs.

Recommendation for Future Research

The study recommends future research to examine professional development for early literacy instruction and reading. Listed below are suggestions for future studies to be considered:

1. Future research should employ a pretest-posttest design within a quasi-experiment, one in which participants are studied before and after the LETRS professional development.

2. A comparative study could be conducted between schools or school districts of teachers' participation in various forms of similar professional development: Language Essentials for Teachers of Reading and Spelling, the Phonics First Orton-Gillingham Multi-Sensory approach, and Saxon Phonics professional development practices and methods.
3. A study to test the correlation between early literacy professional development and the Third Grade Reading Gate.
4. Future research should analyze data on the literacy coaches in each school to evaluate the effectiveness of their practices.
5. A study should investigate school administrators' knowledge of early literacy teaching strategies, classroom implementation of LETRS professional development, and follow-up after full implementation of the LETRS professional development.

APPENDIX A - Letter Requesting Permission from Superintendents

March 19, 2021

Dear Superintendent,

I am currently enrolled as a doctoral student in the Educational Leadership department at The University of Southern Mississippi. I am in the process of completing the dissertation stage of the program. My research focuses on professional development, specifically the Language Essentials for Teachers of Reading and Spelling (LETRS). My research study will gather teacher perspectives on the Language Essentials for Teacher of Reading and Spelling (LETRS) professional development provided by Voyagers Sopris Learning.

I am requesting permission to elicit anonymous voluntary responses via email from the teachers in your district that participated in units 1-6 of the Language Essentials for Teachers of Reading and Spelling (LETRS) professional development training during spring semester 2019 and fall semester 2020. The study is designed to use a qualitative approach to collect data from a 22 question survey that your teachers will complete by an online link. The study will benefit administrators by gauging teachers' perceptions of the LETRS professional development on student learning outcomes.

For your convenience, please click the online link below granting permission to survey the teachers in your district. If you have questions regarding this study, please contact me directly at (601) 394-8456 or email me at billie.payette@usm.edu. You may also contact my committee's chairperson, Dr. David Lee, at The University of Southern Mississippi, at (601) 266-6062 or at David.c.lee@usm.edu. Thank you for your time and consideration.

Sincerely,

Billie Payette Fick

Doctoral Candidate

The University of Southern Mississippi

Department of Educational Leadership and School Counseling

APPENDIX B - Consent Letter

Dear Potential Participants,

My name is Billie Fick. I am a retired administrator from a Mississippi school district and completing my Ph.D. at the University of Southern Mississippi. I want to request your help in my research study as part of my doctoral dissertation. In this study, I am surveying teachers to measure their perceptions of the Language Essentials for Teachers of Reading and Spelling (LETRS) statewide professional development training. Participating in this study would allow you to reflect and provide your opinion of the LETRS professional development training to build teachers' knowledge in phonological awareness and phonics.

This study's procedures will be as follows: Teacher participants will receive a questionnaire entitled Language Essentials for Teachers of Reading and Spelling (LETRS) Professional Development and use the link posted to complete an online version of the survey.

If you would like to participate, please fill out the attached questionnaire. It should take about 10 minutes. Please do not put your name or any information on the questionnaire that could identify you so that all data collected is anonymous. You have the right not to respond to any question that makes you uncomfortable. By reading the consent letter, you agree that you understand the procedures, risks, and benefits of the research. You are free to refuse to participate or to withdraw your consent to participate in the research at any time without penalty or prejudice; your participation is entirely voluntary. Any information that is inadvertently obtained during the course of this study will remain completely confidential. The results will be compiled and submitted as a doctoral study. After all the surveys have been received, they will be placed in manila envelopes and sealed until the data will be examined. After the project is complete, all data will be stored in a locked filing cabinet. The surveys will be shredded, and the files will be erased five years after the study has been completed. There are no risks involved in participating in this study.

The University of Southern Mississippi Institutional Review Board ensures that research studies involving human subjects follow federal regulations and have approved the research and this consent letter. Questions regarding your right as a participant in this study should be directed to the Institutional Review Board's chair, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, Mississippi 39406, (601) 266-6820. Mrs. Billie S. Fick, a USM Educational Leadership doctoral student, will answer any questions regarding the research itself by calling (601)394-8456. Any new information that develops during the study will be provided to you if the information might affect your willingness to continue participation in the study.

By completing the questionnaire, you acknowledge you have read this consent letter and agree to participate in this study. Please click on the link below to complete the survey.

Sincerely, Billie Payette Fick

APPENDIX C - Survey Instrument

Language Essentials for Teachers of Reading and Spelling (LETRS) Professional Development Survey

Q1 *Position(s) currently held*

Kindergarten Teacher

- First Grade Teacher
- Second Grade Teacher
- Third Grade Teacher
- Fourth Grade Teacher
- Fifth Grade Teacher
- Literacy Coach
- Other

Q2 The number of students you teach in a week for literacy instruction during the 2020-2021 school year.

- 0 - 18
- 19 - 24
- 25 - 32
- 33 - 40
- 41 - 56
- 57 +

Q3 What is the highest degree you have earned?

- Bachelors
- Masters
- Specialist
- Ph.D./Ed.D.
- Other

Q4 Including this year, how many years have you been in education?

- 0 - 2 years
- 3 - 6 years
- 7 - 10 years
- 11 - 15 years
- 16 - 20 years
- 21+ years

Q5 Do you teach in a subject level that is tested under the state accountability system?

- Yes
- No

Q6 Do you teach in a grade that is tested under the state accountability system?

- Yes
- No

Q7 During the 2020-2021 school, are you teaching in-person, online-only, or hybrid?

In-person

Online-only

Hybrid

Q8 How big of a barrier is technology to most of your students' learning phonics?

Strongly disagree

Somewhat disagree

Neither agree nor disagree

Somewhat agree

Strongly agree

Q9 How helpful have parents been when supporting literacy skills remotely?

Strongly disagree

Somewhat disagree

Neither agree nor disagree

Somewhat agree

Strongly agree

Q10 Face-to-face is very important when teaching phonics

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q11 During literacy instruction, I emphasize phonemic awareness.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q12 Which of the following Language Essentials for Teachers of Reading and Spelling (LETRS) Units have you attended?

- None
- Unit 1
- Unit 2
- Unit 3
- Unit 4
- Unit 5
- Unit 6
- Unit 7
- Unit 8

Q13 How many additional literacy training, other than LETRS have you attended?

- 1
- 2
- 3
- 4 +

Q14 From the LETRS training, how frequently do you use the information presented in LETRS training for your literacy instruction?

- Daily
- 4-6 times a week
- 2-3 times a week
- Once a week
- Never

Q15 The LETRS instructional strategies are more effective with certain subgroups.

- strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q16 The LETRS professional development training provides teachers instructional interventions.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree

Q17 Informal classroom observations:

	Strongly disagree	Somewhat disagree	Neither Disagree nor agree	Somewhat agree	Strongly agree
Show positive results from LETRS training.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Classroom assessments show positive results from LETRS training.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall, I believe my students have been positively impacted from LETRS training.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q18 The LETRS professional development I received:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Improved my knowledge of literacy instruction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improved my skills in literacy instruction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Had an impact on my daily classroom instruction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fostered a climate of instructional improvement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q19 Since attending LETRS training:

	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly agree
Student achievement has improved.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student learning of literacy skills have been enhanced.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have observed changes in the literacy skills of my students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q20 Since I received the LETRS professional development I have received regular focused instructional support.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q21 Since I received the LETRS professional development I have received regular focused follow-up support.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q22 The LETRS training is helpful to my professional growth.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

APPENDIX D - IRB Approval Letter

**Office of
Research Integrity**



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NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
The selection of subjects is equitable.
Informed consent is adequate and appropriately documented.
Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
Appropriate additional safeguards have been included to protect vulnerable subjects.
Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident template on Cayuse IRB.

The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.
Face-to-Face data collection may not commence without prior approval from the Vice President for Research's Office.

PROTOCOL NUMBER: IRB-20-339

PROJECT TITLE: The Impact of Mississippi's K-3 Literacy Initiative Professional Development

SCHOOL/PROGRAM: School of Education, Educational Research and Admin

RESEARCHER(S): Billie Fick, David Lee

IRB COMMITTEE ACTION: Exempt **CATEGORY:** Exempt

Category 1. Research, conducted in established or commonly accepted educational settings, that specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special education instructional strategies, and research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

APPROVED STARTING: March 2, 2021

Donald Sacco

Donald Sacco, Ph.D. Institutional Review Board Chairperson

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