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Families and Schools Together in Academic Partnerships and Student Literacy Achievement

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Abstract

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by

Kathleen S. Reynolds

MS, Walden University, 2010

BS, Eastern Connecticut State University, 1998

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

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August 2021

Abstract

Family engagement in schooling has academic benefits for students and has been cited in decreasing the achievement gap. Half of all study district first-grade students did not meet benchmark goals on continuous text reading assessments. Further, first-grade treatment school students performed below published benchmarks on measures of sight word identification fluency (WIF). The purpose of this study was to examine changes to WIF scores after participation in the Families and Schools Together in Academic Partnerships (FAST-AP) pilot and to examine the effect of parent participation on changes to continuous text reading scores. Emergent literacy and sociocultural learning theories provided the theoretical basis for this study. Research questions examined changes in WIF and continuous text reading scores after participation in FAST-AP using descriptive and causal comparative approaches. Nonprobability purposive sampling was used to identify 70 first-grade students attending two schools in a suburban Title I district in the Northeastern United States to provide archival data. Mean growth for timed (n = 34, M = 34.18) and untimed (n = 33, M = 67.58) WIF scores exceeded the established benchmark (M = 31.5). One sample t-tests indicated timed WIF growth was not statistically significant, while untimed growth reached statistical significance [$t(32) = 8.89$, $p < .001$, $d = 1.55$]. An independent samples t-test indicated no significant difference between the continuous text reading scores of students whose families participated in FAST-AP (n = 39) and those who did not (n = 31). Study results suggest a positive effect of FAST-AP participation on WIF. This study may exert positive social change by providing a strategy that emphasizes collaborative family-school interactions to empower families in supporting foundational literacy skills and improvements in literacy achievement.

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Dedication

I dedicate this work to my Heavenly Father whose plan for me was ordained from the start. His plan has always included the provisions for bringing them to fruition.

I also dedicate this work to the memory of my mother, Joan, who always believed I could do anything I set my mind to doing. Mom, I have doubted your conviction many times along the way from there to here. So many times, I longed to hear your voice assuring me that, with hard work, I was indeed capable of the great things you said I was. And when this journey felt overwhelming, I did hear your voice…through the encouragement of our family and friends whose confidence in me never wavered. Therefore, to my amazing family and friends, I dedicate this work to you, also. Without the support of you who love me unconditionally - you know who you are - this amazing, frustrating, but truly transformative journey would have been impossible. Because of your steadfast support and encouragement, I have discovered that the journey was not mine after all. It belonged to us all. You each contributed to this success story-our success story- and I am so grateful and blessed to have been able to share it with you!

Acknowledgments

I first acknowledge my Lord and Savior, Jesus Christ, for through Him all things are possible. This journey would have been impossible without His ever-present strength and peace in times of struggle…and there were many of those times along this road.

I would like to thank my Chair, Dr. Billie Andersson, who joined the committee later in the process yet responded as though we had been in this together from the start. I cannot thank you enough for your commitment to my success. Your feedback and support were invaluable. I would also like to thank my committee member, Dr. Nicolae Nestor, whose insight and feedback completed our team. Your patience and expertise were greatly appreciated. Finally, I give thanks to my URR, Dr. Shereeza Mohammed, who provided vital feedback and support when I was working solo and needed it most.

I would be remiss if I neglected to acknowledge the sacrifices made by my family during this arduous journey. Thank you, Larry, for putting our couple-time on hold for five years. Our time has finally come. Thank you to my father, Ken, and my siblings and their partners, Maureen and Jeff, (especially) Ken and Joan, Tim and Gloriann, for believing in me and acting interested when I talked shop at family gatherings. Thank you, Dr. Chaya Piotrkowski, for enjoying the shop talk at family gatherings. You were generous with your time, support, and expertise, and I appreciate you. Thank you to my children and their partners, Brad and Danielle, Adam and Danielle, Brian and Stephanie, Heather, and Emily. We had fewer family dinner-and-game nights while I worked, but your love and support carried me through. Finally, to my grandchildren Jason, Grace, Evelyn, and Madelyn, I have struggled to balance my work and time spent with you. Rest assured, Grandma is back and ready to make up for our lost time.

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Chapter 1: Introduction to the Study

The call for family engagement in schooling is ubiquitous in political, scientific, and educational conversations. Active family engagement has been associated with many school success indicators, most notably academic achievement (Boonk et al., 2018). The benefits of parental involvement are thought to be instrumental in ameliorating the trend of declining student achievement, especially in schools with large nondominant cultural, language, and economic groups (Petridou & Karagiorgi, 2018). Research has also suggested positive effects on other academic and social problems such as low rates of student engagement (Park & Holloway, 2017), truancy (Hornby & Blackwell, 2018), behavior problems (Hornby & Blackwell, 2018), and school violence (Song et al., 2019). Parental engagement has been shown to contribute to more positive student attitudes toward school and lower dropout rates (Ross, 2016), and positively affect cognitive and emotional resilience (Wang et al., 2016). Educators and politicians suggest that partnerships with families can potentially close achievement gaps, particularly in students from ethnic minority and low socioeconomic status (SES) backgrounds (Calzada et al., 2015; Epstein, 2018; Hamlin & Flessa, 2018; Ishimaru et al., 2016; Pemberton & Miller, 2015). Much research supports the benefits to students' academic achievement when families and schools partner to support student learning both in and out of the classroom.

That a consensus exists among educators regarding the positive effects of parental engagement on student achievement is undeniable. The problem is half of all first-grade students in the study district did not meet benchmark goals on the Fall 2018 Fountas and Pinnell Benchmark Assessment System 2nd edition (F & P BAS; Fountas & Pinnell,

2010) continuous text reading assessments. Further, the treatment school's Fall 2018 F & P BAS benchmark reading data indicated that 73% of first-grade students were performing below grade-level expectations. Additionally, first-grade students from the treatment school scored below established goals on the Fall 2018 word identification fluency (WIF) assessments, with 61% scoring in the at-risk range on the Vanderbilt WIF assessment and 51% scoring below the end of kindergarten expectations on the Dolch sight word inventory assessment. Poor literacy achievement has been attributed to low rates of family engagement (Alexander et al., 2017; Brown et al., 2019; Wang et al., 2016), yet, according to the assistant superintendent at the study site, the study district lacked a global plan for engaging families in their children's schooling.

I addressed this gap in practice by providing a structure for aligning family engagement efforts across the study district to ensure equitable support for encouraging all families to become engaged in their children's schooling with the goal of strengthening foundational literacy skills and improving benchmark literacy scores. I used a descriptive design to describe the change to WIF scores after family participation in the Families and Schools Together in Academic Partnerships (FAST-AP) family engagement pilot program. Timed Vanderbilt WIF pre- and posttreatment probes and untimed Dolch sight word inventory pre- and posttreatment assessments provided the data points for descriptive analyses. I also used a quasi-experimental design to examine the effect of participation in the FAST-AP pilot program on changes to continuous text reading scores. The independent variable was parent engagement in the FAST-AP family

engagement pilot program, and the dependent variable was score change on the F & P BAS assessment.

This study has implications for positive social change because of its potential to improve the literacy growth scores of first-grade students. The FAST-AP pilot program provides a vehicle for empowering families to forge authentic family-school partnerships with the goal of improving literacy growth. The FAST-AP family engagement program (Reynolds, 2018) positions families as essential partners possessing a shared commitment and accountability to student literacy learning and growth. The central philosophy of the FAST-AP family engagement program advances a shift from deficit thinking about families as passive participants in student learning to a perception of families as authentic collaborators capable of meaningful contributions to student literacy achievement. This study may also contribute to positive social change as it provides educators with an improved understanding of effective family engagement practices that positively impact student achievement. Educators may use this awareness to hone their focus on high leverage, equitable family engagement behaviors, thus increasing the levels of engagement for all families and supporting improvements in student literacy achievement.

In Chapter 1, I discuss the background literature regarding family engagement, the study problem, and its purpose. I also outline the study parameters, including the research question, theoretical framework, nature of the study, essential definitions, assumptions, scope and delimitations, limitations, and the significance of the study.

Background

Family engagement is a multifaceted construct. Social scientists, parents, and educators consistently identify parental involvement in school as an essential factor contributing to improved student achievement (Boonk et al., 2018; Dotterer & Wehrspann, 2016; Hamlin & Flessa, 2018). There is ample research to support a positive relationship between parents' engagement in their children's school or schoolwork and improved student achievement, motivation, and social/emotional outcomes (Barger et al., 2019; Degol et al., 2017; Grijalva-Quiñonez et al., 2020; Mendez & Swick, 2018). Wang et al. (2016) identified parent engagement as a critical protective factor in fostering the development of cognitive and emotional resilience, especially in students from economically disadvantaged backgrounds. In contrast, low rates of parental engagement, typically attributed to families of low socioeconomic status (SES), nondominant cultural groups, and English language learners (ELLs) may place these students at increased risk for lagging literacy achievement as compared to their White, English-speaking, higher SES peers (Alexander et al., 2017; Brown et al., 2019; Wang et al., 2016). The perception of lower rates of engagement from these marginalized groups may result from differences in how families and schools define engagement and the Eurocentric engagement activities typically associated with family engagement that limit the range of expected family engagement behaviors.

The behaviors and activities associated with family engagement are manifold, resulting in varied definitions. Inclusive definitions of engagement encompass vague types of parental efforts to dedicate resources and invest time in student education

(Boonk et al., 2018). More specific definitions of engagement suggest that parental engagement activities supporting student education are home-based or school-based (Boonk et al., 2018). However, recent studies include parental dispositions, such as parental aspirations and expectations for their children's education, as distinctive forms of engagement (Petridou & Karagiorgi, 2018). Parental aspirations are nuanced and can be exhibited as proactive parenting behaviors enacted in early childhood before students enter school (Petridou & Karagiorgi, 2018). These may include reading, engaging in enriching conversations, and creating a stimulating climate. In contrast, parental engagement behaviors related to parental expectations are reactive and occur in response to school problems (Petridou & Karagiorgi, 2018). Definitions of parent engagement typically include descriptions of school-based or home-based activities or parental dispositions that influence student outcomes.

Park and Holloway (2017) dissected the family engagement construct even further to more precisely define school-based parenting behaviors as private-good or public-good. Private-good school-based parenting behavior is distinguished by actions directed toward benefiting individual students (Park & Holloway, 2017). Attendance at academic conferences or participation in literacy or numeracy nights are private-good activities. These school-based events provide families with opportunities to learn skills and strategies for promoting their children's academic growth. On the other hand, public-good parenting behaviors describe involvement focused on schoolwide improvements and are positively influenced by parents' SES and education (Park & Holloway, 2017).

Attendance at school governance meetings is a public-good behavior focused on conferring benefits to the schoolwide community.

A consensus in the research literature supports students' extensive benefits when parents are involved in their schooling. However, studies suggest that the provenance of parent engagement behaviors—school or home—may influence who is most likely to benefit and the degree to which benefits accrue (Ross, 2016). Though various sources and related outcomes of parental engagement behaviors have been widely studied, their specific influences on student academic achievement continue to be sources of debate.

Commonly expected behaviors attributed to school-based family engagement practices include attending academic conferences, school governance meetings, and other events outside of the home hosted by the school (Vassallo, 2018). Ishimaru (2019) suggested that traditional parent engagement initiatives, which include school-based training, while well-intentioned, are primarily school-centered programs that promote a unidirectional relationship between families and schools. These models typically foster one-way communication that sets teachers apart from families, thus positioning school personnel as educational and child development experts and overlooking more culturally or context responsive strategies founded on bidirectional exchanges (Ishimaru, 2019). These models emerge from a deficit view of parent engagement and rely on interventions designed to fix parents (Gonzales & Gabel, 2017; Ishimaru, 2019). Traditional school-based parent involvement initiatives often neglect the importance of family and culturally centered activities that have been found to promote academic achievement (Gonzales & Gabel, 2017; Ishimaru, 2019). Examples of family-centered forms of involvement

include setting high expectations for learning, parent-child communication about school, and promoting moral, spiritual, or cultural values.

Several studies suggested that parental involvement in home-based student activities (i.e., homework help, reading with children, playing games) leads to significant academic and social/emotional gains (Boonk et al., 2018). Although some research suggested that school-based parental involvement confers little benefit to students compared to the benefits from home-based support (Park & Holloway, 2017; Petridou & Karagiorgi, 2018; Portwood et al., 2015), there is research to suggest that volunteering at school and attending programs initiated as school-based training designed to equip parents with instructional strategies carried out in the home result in specific literacy gains (Fagan et al., 2016). Informal observations of teacher modeling and parent workshops that focused on assisting parents in developing skills that support student literacy development at home had a more significant impact on student achievement than courses designed to promote parents' personal development and well-being (Fagan et al., 2016). In each of these cases, parent engagement is defined by activities that are viewed as the responsibility of parents or as the shared responsibility of parents and educators (Crosby et al., 2015; Park & Holloway, 2017; Petridou & Karagiorgi, 2018; Portwood et al., 2015).

Recent findings point to collective parent engagement (CPE) as having significant, positive effects on many aspects of student social/emotional and academic development (Alameda-Lawson, 2014; Alameda-Lawson & Lawson, 2016; Lawson & Alameda-Lawson, 2012). CPE programs focus on establishing adult social networks as

vehicles for facilitating the development of parents' child advocacy and leadership skills, thereby promoting achievement for all students (Ishimaru, 2019). Fostering the development of positive relationships among parents in the school community not only reduces barriers to parent engagement. It also may provide increased motivation for parent involvement that shifts foci from unilateral activities aligning to narrowly defined school agendas to include those that leverage reciprocal, multidirectional interaction (Hamlin & Flessa, 2018). Collective, reciprocal relationships among parents and between families and schools may lead to improved student achievement in critical academic domains such as numeracy and literacy (Ishimaru, 2019; Ishimaru et al., 2016). However, CPE programs implemented as the sole intervention for improving parent involvement and student achievement can be problematic. Ishimaru et al. (2016, p. 852) suggested that such a narrow focus can "default to assimilating (parents) into the dominant norms, expectations, and behaviors, thereby inadvertently re-inscribing asymmetric power dynamics and constraining parent voice and leadership," limiting the effectiveness of CPE. Additionally, CPE is ineffective when implemented as an isolated intervention (Alameda-Lawson & Lawson, 2016, 2019). The transformative potential of CPE is evident when implemented with other parent engagement initiatives (Alameda-Lawson & Lawson, 2016).

Hoover-Dempsey and Sandler (1995) suggested that parents become involved in their children's schooling for three primary reasons: they have developed a role construction for involvement, parental self-efficacy for supporting student learning, and perceive both opportunities and demands for their involvement. Hoover-Dempsey et al.

(2005) defined parental role construction as a parent's perceptions regarding their responsibility about how they should engage in their children's schooling. Role construction influences the types of activities parents elect to participate in and may include participating in school-based activities or supporting student learning at home (Yamamoto et al., 2016). Parental self-efficacy for being involved in schooling is related to the belief that they possess the requisite skills to provide the appropriate support for promoting their children's academic achievement (Yamamoto et al., 2016). Hence, parents with low perceived efficacy may choose not to support student learning despite of having a robust parental role construction (Yamamoto et al., 2016). In addition to parental role construction and self-efficacy, parents become involved when they perceive that their children's school provides opportunities to become involved and that their involvement is welcome and expected (Hoover-Dempsey & Sandler, 1995; Yamamoto et al., 2016). Colgate et al. (2017) found that invitations from teachers and students had a significant effect on active involvement in a home reading challenge. For parent engagement programs to be effective, then, parental role construction and parental self-efficacy for supporting student academic achievement must be addressed (Hoover-Dempsey & Sandler, 1995, 1997; Hoover-Dempsey et al., 2005). Additionally, involvement programs should also include consistent opportunities or invitations/demands for involvement that communicate the school's strong desire or need for involvement (Yamamoto et al., 2016).

One popular family engagement program is Academic Parent-Teacher Teams (APTT). APTT is a hybrid engagement program that combines elements of home- and

school-based activities with opportunities for collective parent engagement (APTT, 2017; Paredes, 2017). According to Paredes (2017), this engagement model replaces traditional parent-teacher conferences and offers families opportunities to collaborate with teachers. APTT is premised on the accountability principle that families who possess a clear understanding of their children's current academic performance and target performance standards, coupled with resources and strategies for supporting student learning at home, shift from being merely involved in education to having the capacity to authentically partner with schools in educating their child (APTT, 2017; Jeffco Research and Assessment Design, 2016; Paredes, 2017; Sanzone et al., 2018). Authentic collaboration between families and schools is the key to promoting the academic achievement of all students.

The APTT family engagement program incorporates many features that research suggests are elements of high-quality family engagement programs; however, the implementation of APTT has received mixed results. Although teachers and parents reported improvements in home-school relationships, parents desired more personalized interactions, such as traditional parent-teacher conferences (Jeffco Research and Assessment Design, 2016). Parents enjoyed receiving activities and supporting materials; however, families cited a lack of ongoing support between meetings, contributing to low levels of engagement from home (Jeffco Research and Assessment Design, 2016). Families also suggested that schools provide more opportunities to strengthen parental role construction, self-efficacy, and appropriate opportunities to become engaged (Jeffco Research and Assessment Design, 2016). A parent survey conducted by the Houston

Independent School District indicated the need for help with specific academic skills to support students' learning from home (Houston Independent School District, Department of Research and Accountability, 2019). Parents also indicated that a lack of perceived invitations or invitations that did not include critical resources such as transportation and childcare, or that conflicted with work schedules, were primary barriers to participation in school-based APTT meetings (Houston Independent School District, Department of Research and Accountability, 2019). Although the APPT family engagement program attempts to incorporate the strengths of home-based parent involvement with school-based training (Paredes, 2017), research suggests it offers few opportunities for collective parent engagement and does not adequately support the ongoing development of parental role construction and self-efficacy (Sanzone et al., 2018). Parental role construction and self-efficacy are socially constructed and, therefore, subject to social influence (Yamamoto et al., 2016). Thus, the APTT family engagement program and others similar to it should account for their importance when planning the frequency and types of involvement activities to maximize the potential for improving the level of parent participation.

In 2016, in response to low rates of family engagement and declining literacy benchmark scores, the Study School District began a 2-year pilot of the APTT parent engagement program to capitalize on the benefits of parent engagement in improving student achievement. Similar to participants in the Jeffco Public School District and Houston Independent School District pilots, parents and educators in the Study School district reported concerns about the APTT family engagement program (Houston

Independent School District, Department of Research and Accountability, 2019; Jeffco Research and Assessment Design, 2016). According to the assistant superintendent of the study site, teacher feedback from APTT focus groups was mixed and indicated that the program required an intense time commitment to prepare parent presentations and organize home learning materials. Additionally, teachers reported challenges supporting families in understanding and setting appropriate SMART goals during whole group family meetings. Teachers also noted that overall family attendance at whole group meetings was weak. There was scant evidence from year-end student benchmark reading achievement data to suggest the program was effective. After a 2-year pilot, Study School District determined student gains in overall academic achievement were inadequate, and the APTT engagement program was terminated.

During the 2018–2019 school term, the APTT family engagement program was replaced across the school district with an annual Open House/Academic Night. Families received information about grade-level expectations for academic subjects and social/emotional learning. The district provided a list of learning activities suitable for supporting school learning at home and a link to a monthly electronic newsletter providing grade-level suggestions for similar activities. Although the recommended activities included materials often found in the home, such as dice or playing cards, this plan did not address the potential financial barriers to family involvement for families who did not have the necessary items or the means to acquire them. Although the APTT pilot results were unimpressive, families who participated in the program grew accustomed to receiving learning activities complete with all essential learning materials

and required no preparation. Hannon et al. (2020) cited that provision of learning materials was essential for enhancing home literacy learning. The new plan provided families with activity suggestions without the requisite resources, leaving them with little support for helping their students' academic learning from home.

The Families and Schools Together in Academic Partnerships (FAST-AP) family engagement program (Reynolds, 2018) was developed in response to the vacuum of family and student support from the school district. The study site principal and superintendent approved the pilot for use in the first-grade cohort in one of the eight elementary schools in the study district. In contrast to the district's default family engagement plan, all materials required to complete FAST-AP literacy activities were provided by the school. FAST-AP addresses the APTT family engagement program's documented weaknesses and incorporates the salient features of both CPE and traditional engagement programs (Reynolds, 2018). FAST-AP programmatic components also address the areas of parental role construction, self-efficacy, and perceived invitations/demands for involvement to increase the likelihood of influencing parent involvement and improving student academic achievement (Reynolds, 2018).

The FAST-AP family engagement program incorporates current research about the positive effects of parent engagement on student achievement, how and why parents are motivated to be involved in student learning, and the elements of effective parent engagement programs (Reynolds, 2018). Parent and administration feedback regarding the perceived positive and negative aspects of APTT was crucial in selecting each FAST-AP family engagement program element. FAST-AP is an innovative family engagement

program, the effects of which have not been scientifically researched. Further study is needed to ascertain its effects on family engagement and student literacy achievement. There have been wide variations in efforts to engage families in their children's education within the study district. Family engagement plans have lacked uniformity across the district, resulting in inequitable family support due to disparate approaches not only between schools but often among grade-level cohorts within schools. My goal was to address this gap in practice by providing a plan for family engagement that would increase the consistency of invitations for family involvement, encourage diverse opportunities for family engagement, and provide a uniform structure for teacher practices in engaging their students' families. Expanding FAST-AP implementation to include first-grade cohorts from other study district schools that currently lack a formal targeted family engagement focus could lead to widespread improvements in first-grade students' literacy achievement across the study district.

Problem Statement

Research literature suggests a positive relationship between parental involvement in school and improved student literacy achievement. Brown et al. (2019) found that home-based literacy activities are especially vital in promoting students' literacy achievement who read below grade-level expectations. The problem is half of all first-grade students in the study district did not meet benchmark goals on Fall 2018 F & P BAS continuous text reading assessments. Further, the treatment school's Fall 2018 F & P BAS benchmark reading data indicated that 73% of first-grade students were performing below grade-level expectations. Additionally, first-grade students from the

treatment school scored below established goals on the Fall 2018 WIF assessments, with 61% scoring in the at-risk range on the Vanderbilt WIF assessment and 51% scoring below the end of kindergarten expectations on the Dolch sight word inventory assessment. Lagging literacy achievement can be attributed to low family engagement rates (Alexander et al., 2017; Brown et al., 2019; Wang et al., 2016). Research supports the importance of family engagement in improving student literacy achievement and indicates that family literacy experiences may increase achievement scores on high-stakes assessments (Brown et al., 2019).

The study district lacked a universal plan for engaging families in strengthening foundational reading skills to improve literacy achievement scores on measures of continuous text reading or individual WIF assessments. I addressed this gap in educator practice by providing a comprehensive plan for engaging families in supporting the development of specific grade-level foundational literacy skills and was the impetus for implementing the FAST-AP family engagement pilot program. The pilot program provided a structure for aligning family engagement efforts across the study district to ensure equitable support for encouraging all families to become engaged in their children's schooling to strengthen foundational literacy skills and improve benchmark literacy scores.

Purpose of the Study

Lagging literacy achievement has been attributed to low family engagement rates (Alexander et al., 2017; Brown et al., 2019; Wang et al., 2016) and was the impetus for implementing the FAST-AP family engagement pilot program. The purpose of this

quantitative study was to examine changes to WIF scores after family participation in the FAST-AP family engagement pilot program and to examine the effect of parent participation in the FAST-AP pilot program on changes to continuous text reading scores of first-grade students from a suburban Title I school in the Northeastern United States. Timed Vanderbilt WIF pre- and posttreatment probes and untimed Dolch sight word inventory pre- and post-treatment assessments provided the data points for descriptive analyses. For the inferential analysis in this study, the independent variable was parent engagement in the FAST-AP family engagement pilot program. The dependent variable was change in continuous text reading scores as measured by F & P BAS assessments.

Research Questions and Hypotheses

Research Question 1 (RQ1): What is the change to the timed WIF scores, as measured by timed Vanderbilt WIF probes, of first-grade pilot students in a suburban Title I school in the Northeastern United States after participation in the FAST-AP family engagement pilot program?

Null Hypothesis ($H_0 1$): There is no the change to the timed WIF scores, as measured by Vanderbilt WIF probes, of first-grade pilot students in a suburban Title I school in the Northeastern United States after participation in the FAST-AP family engagement pilot program.

Alternative Hypothesis ($H_1 1$): There is a change to the timed WIF scores, as measured by Vanderbilt WIF probes, of first-grade pilot students in a suburban Title I school in the Northeastern United States after participation in the FAST-AP family engagement pilot program.

Research Question 2 (RQ2): What is the change to the untimed WIF scores, as measured by Dolch sight word inventory assessments, of first-grade pilot students in a suburban Title I school in the Northeastern United States after participation in the FAST-AP family engagement pilot program?

Null Hypothesis ($H_0$2): There is no change to the untimed WIF scores, as measured by Dolch sight word inventory assessments, of first-grade pilot students in a suburban Title I school in the Northeastern United States after participation in the FAST-AP family engagement pilot program.

Alternative Hypothesis ($H_1$2): There is a change to the untimed WIF scores, as measured by Dolch sight word inventory assessments, of first-grade pilot students in a suburban Title I school in the Northeastern United States after participation in the FAST-AP family engagement pilot program.

Research Question 3 (RQ3): What is the effect of parent participation in the FAST-AP family engagement pilot program on changes to the continuous text reading scores of first-grade students in a suburban Title I school in the Northeastern United States compared to continuous text reading growth scores of first-grade students in a suburban Title I school in the Northeastern United States whose families did not participate, as measured by the F & P BAS assessment?

Null Hypothesis ($H_0$3): There is no statistically significant effect of parent participation in the FAST-AP family engagement pilot program on changes to the continuous text reading scores of first-grade students in a suburban Title I school in the Northeastern United States compared to continuous text reading growth scores of first-

grade students in a suburban Title I school in the Northeastern United States whose families did not participate, as measured by the F & P BAS assessment.

Alternative Hypothesis ($H_1 3$): There is a statistically significant effect of parent participation in the FAST-AP family engagement pilot program on changes to the continuous text reading scores of first-grade students in a suburban Title I school in the Northeastern United States compared to continuous text reading growth scores of first-grade students in a suburban Title I school in the Northeastern United States whose families did not participate, as measured by the F & P BAS assessment.

Theoretical Framework

Marie Clay's early work in emergent literacy theory (Clay, 1966, as cited in Sulzby & Teale, 1991) and the sociocultural learning theory of Russian psychologist Lev Vygotsky (1962, as cited in Tharp & Gallimore, 1991) provided the theoretical foundation for this study. Sociocultural learning theories challenged formal schooling's primacy in literacy development and provided a complex description of alternative social contexts and processes in and through which learning occurs (Tharp, 1997; Tharp & Gallimore, 1991). Vygotsky contended that cognitive development is driven by social interactions between the child and the environment and not by maturation, as posited previously by developmental theorists (Razfar & Gutierrez, 2003). Vygotsky (1978) differentiated between lower mental functions described as natural abilities determined by heredity and higher mental functions described as socially or culturally mediated. Higher mental functions occur first as intermental processes that develop through social interactions between individuals engaged in shared sociocultural activities (Tharp &

Gallimore, 1991). Nascent cognitive abilities become gradually internalized as intramental processes within the child (Black & Allen, 2018; Tharp & Gallimore, 1991). Sociocultural learning theory emphasizes the importance of social apprenticeship between the child and a *more knowledgeable* or *capable other* (MKO) in what Vygotsky (1978) identified as the *zone of proximal development* (ZPD). The ZPD can be described as the distance between the actual developmental level determined by what the child can perform independently and their level of potential development when guided by the MKO (Abtahi et al., 2017; Eun, 2019; Vygotsky, 1978). Vygotsky (1978) defined the MKO as one who has mastered the target skill and can provide incremental support through collaboration with the child, scaffolding the task's complexity to support the gradual attainment of a higher level of performance (Markova, 2017). The process of learning involves progressing through the ZPD with the support of a MKO to the next level of understanding, which creates a new ZPD and propels development (Clark, 2018). Vygotsky's (1978) sociocultural learning theory emphasizes the role of social mediation by MKOs in the ZPD and shares similarities with Clay's (1966, as cited in Sulzby & Teale, 1991) emergent literacy theory.

The early work of Marie Clay (1966, as cited in Sulzby & Teale 1991) first introduced the emergent literacy framework. The understanding that literacy development and literacy learning are fundamentally social processes that are the products of social interactions in informal settings even before children enter formal schooling provided the premise for the emergent literacy framework (Sulzby & Teale, 1991; Teale, 1986). Like sociocultural theory, the emergent literacy framework provided a contrast to the widely

held beliefs of school readiness that described literacy learning as a linear intrapersonal mental process that began with formal schooling (Razfar & Gutierrez, 2003). Clay (1966, as cited in Sulzby & Teale, 1991) proposed that, even before children can read or write in conventional ways, they are already engaged in a continuous process of becoming literate through social interactions. The emergent literacy framework expanded the view of the behaviors that constitute literacy and provided a more comprehensive understanding of the MKO's role and the work that occurs in the ZPD described in sociocultural theory (Clay, 1966, as cited in Sulzby & Teale, 1991). The emergent framework posits that literacy learning and growth emerge from modeled and shared literacy experiences with members of the child's home and community and stresses the importance of families and literacy-rich environments in nurturing literacy development (Hannon et al., 2020; Razfar & Gutierrez, 2003). Akin to the ZPD, Petrová et al. (2020) suggested that a literacy-rich environment provides the space, opportunities, and motivation for exploring print and writing through spontaneous child-selected activities that lead to the gradual acquisition of conventional literacy (Petrová et al., 2020). Sulzby and Teale (1991) suggested that emergent literacy development skills result from social conversations and is enhanced through the purposeful engagement of the child and adult in literacy activities such as reading together, participating in wordplay, and playing other literacy games. The experienced adult supports the child through successive interactions, gradually releasing responsibility for using the emerging skill to the child (Sulzby & Teale, 1991). When considered together, emergent literacy and sociocultural learning theories provide a comprehensive understanding of the social nature of literacy development and the critical

role played by families in scaffolding learning that is just beyond the child's ability to achieve independently. Both theories are well-aligned to the research questions and the study approach. Their applicability to the present study will be discussed in greater detail in the Theoretical Framework section in Chapter 2.

Nature of the Study

This was a quantitative ex post facto study. Quantitative research methods emphasize gathering numeric data to understand the relationships or effects of variables, explain a particular phenomenon, and generalize results across specified groups (Frey, 2018). Quantitative research methods, therefore, are appropriate for describing score changes after a treatment and analyzing the effects of a treatment program on score changes. Descriptive research designs are appropriate for quantifying and describing data (Allen, 2017). Quasi-experimental designs are appropriate to study naturally occurring groups or groups whose membership is assigned prior to an investigation, such as is found with students in classrooms (Burkholder et al., 2016). Although a quasi-experimental design does not afford the same confidence in making causal inferences as a randomized experimental design, a pretest-posttest of students' reading benchmark scores from the treatment and comparison groups acted to improve the credibility of results (Burkholder et al., 2016).

Ex post facto analysis using a paired samples *t*-test indicated whether a statistically significant difference existed between pre- and posttest WIF scores. A calculation of the difference between the mean pretest and posttest scores provided the

mean WIF score change. A one-sample *t*-test indicated whether the differences between WIF change scores and published benchmarks for growth were statistically significant.

Ex post facto analysis using an independent samples *t*-test indicated whether there was a statistically significant difference in changes to continuous text reading scores in students whose families engaged in the FAST-AP family engagement pilot program and those who did not. The independent variable was family participation in the FAST-AP family engagement pilot program. The dependent variable was pre- and posttest score growth in continuous text reading, as measured by the F & P BAS assessment.

The *t*-test is an inferential statistical test to determine if there is a statistically significant difference between the means of two groups and is particularly well-suited for use with research designs using repeated measures (Allen, 2017). The following statistical assumptions must be met for paired samples *t*-tests: the test variables must be normally distributed, observations are independent of one another, the grouping variable is nominal, and the dependent variable should be continuous, contain no outliers, and be normally distributed (Frey, 2018). An independent samples *t*-test must also meet the assumption of homogeneity of variances (Frey, 2018). According to the results of a Shapiro-Wilk test, Vanderbilt WIF data were not normally distributed and did not meet the assumptions for paired samples *t*-tests. The Wilcoxon signed-rank test is the nonparametric alternative for comparing the difference between the means of two heterogeneous matched groups (Knapp, 2018) and was used to answer RQ 1. The Shapiro-Wilk test results further indicated that Dolch sight word inventory data were normally distributed and met the assumptions for *t*-tests. Therefore, a paired samples *t*-

test provided the statistics to answer RQ2. In addition, the Shapiro-Wilk test results indicated that continuous text reading data were normally distributed, and Levene's Test of Equality of Variances indicated that the assumption of homogeneity. Continuous text reading data met the statistical assumptions for independent samples *t*-tests. Therefore, an independent samples *t*-test provided statistics used to answer RQ 3.

Definitions

FAST-AP: The FAST-AP family engagement program is a novel hybrid family engagement program which synthesizes CPE and school-based family training elements to promote active academic engagement from home (Reynolds, 2018). It incorporates support for developing strong parental role construction for being active in schooling and provides opportunities to strengthen parental self-efficacy for academic involvement (Reynolds, 2018). Culturally responsive practices mitigate subtractive schooling practices shown to present barriers to the active school engagement of families from nondominant cultural, linguistic, and SES groups (Gonzales & Gabel, 2017). The FAST-AP family engagement program intentionally incorporates culturally responsive practices and honors families' unique contributions to their children's schooling (Reynolds, 2018). The FAST-AP philosophy is centered on the assumptions that student outcomes are a shared obligation of schools and families and that previously unrecognized forms of home-based engagement are valuable in overall academic achievement (Vassallo, 2018).

Home-based involvement: Although research suggests that parents become involved in their children's schooling in many ways outside of the classroom (Epstein,

2018), for the purposes of the present study, the definition for home-based involvement was limited to engagement in FAST-AP literacy learning activities.

More knowledgeable or competent others: *More knowledgeable others* and *more competent others* are inclusive terms that encompass family members, peers, caretakers, or teachers who possess a higher level of skill and can scaffold the learning of the less knowledgeable or less competent learner in their zone of proximal development (Acar et al., 2017; Veraksa et al., 2016).

Parent or family involvement or engagement: Parent or family involvement or engagement has been defined in research literature in different ways. Allen and White-Smith (2018) suggest shifting from deficit-based definitions of engagement focusing on observable behaviors such as attendance at school-based activities to include other ways families support students (i.e., nurturing, discussions about school, and engaging in other supportive activities). Definitions for *parent involvement* often focus on demonstrable behaviors such as attending conferences and parental outreach efforts (Alexander et al., 2017). Programs adopting this definition illustrate a gap in cultural sensitivity and awareness and position parents as passive observers who must learn how to fix their children's low achievement (Paredes, 2017; Sanzone et al., 2018). In direct contrast are *parent engagement* definitions that position parents as capable partners in education and desirous to actively participate and apply their knowledge to support their children's academic achievement. The current study used parent or family participation or engagement synonymously to define the construct to include attendance at school-based FAST-AP meetings or conferences or using home-based FAST-AP literacy activities.

School-based involvement: School-based involvement has been defined as involvement in school events and activities related to children's learning (Alexander et al., 2017). This form of involvement is characterized by attendance at conferences and participation and attendance at non-scholastic events such as book fairs, PTA, and other social events (Epstein, 2018). For the present study, school-based involvement was recorded in event attendance logs and defined as attendance at the Open House FAST-AP launch, morning FAST-AP BreakFAST Meetings, and FAST-AP SMART goal conferences.

Student literacy score change: Changes in students' WIF and continuous text reading scores were computed by deducting the mean value of pretest scores from the mean value of post-test scores to arrive at a summative score change.

Zone of proximal development: The distance between a student's actual achieved development and their level of potential development with guidance or in collaboration with a more knowledgeable or competent other (Vygotsky, 1978).

Assumptions

For this study, it was assumed that all students attending the treatment school were engaged in using FAST-AP literacy activities. Minimally, students were engaged in FAST-AP literacy activities with families who attended monthly BreakFAST meetings. Staff from the onsite childcare program and other school support staff also used FAST-AP literacy activities with first-grade students in the treatment school during the onsite before/after school program. Additionally, community volunteers visiting first-grade classrooms in the treatment school used FAST-AP literacy activities with individual

students and small groups. It was further assumed that similar to other forms of homework typically completed by students in the primary grades, most families in the study school used the FAST-AP literacy activities at home at least occasionally to support student literacy learning.

Scope and Delimitations

The scope of this study was limited to describing changes in WIF scores after family participation in the FAST-AP family engagement pilot program and examining the effects of family engagement in the FAST-AP pilot program on changes to the continuous text reading scores of first-grade students in a suburban Title I school district in the Northeastern United States. Descriptive analyses used pre- and posttreatment WIF scores from timed Vanderbilt WIF probes and untimed Dolch sight word inventories. The independent nominal variable used for inferential analysis was family participation in the FAST-AP pilot program. The dependent variable, change in continuous text reading scores as measured by the F & P BAS, was a discrete variable measured at the interval-ratio level.

The study was delimited to first-grade students from two elementary schools in the study district. Treatment and comparison schools with similar class sizes, SES, and demographic profiles were selected from the suburban Title I school district in the Northeastern United States to provide archival data to answer the research questions. Although research suggests the importance of cultivating parent engagement beginning as early as preschool and kindergarten (Hamlin & Flessa, 2018; U.S. Department of Health and Human Services & U.S. Department of Education, 2016, May 5), the FAST-AP

family engagement pilot program was provisionally approved by the treatment school principal and study district superintendent for use exclusively with the first-grade cohort in the proposed treatment school. FAST-AP home-based literacy activities provided a stress-free and pleasant social experience for families of beginning readers. They were intended to replace more traditional forms of homework assignments such as worksheets. FAST-AP home-based literacy activities shared characteristics with traditional first-grade homework activities (Rosário et al., 2018). They provided opportunities for the daily practice of first-grade foundational literacy skills and were tied to specific grade one reading measures. Due to the emphasis on beginning reading skills, the study was limited to students in first grade. The present study may be instrumental in informing decisions regarding the generalizability of results and expanding the FAST-AP family engagement program to other first-grade cohorts within the study district.

Limitations

The present study was limited by three threats to external validity related to selection-treatment effects, limiting the generalization of study results (Urban & van Eeden-Moorefield, 2018). First, the participants who attended FAST-AP events and used FAST-AP literacy activities and materials at home did so voluntarily. These participants may already have been highly motivated and been strong advocates of family-school involvement and collaboration. Participating families may have been biased and not representative of all families from the sample population. Therefore, the generalization of study results to a larger population of first-grade families in the study district may be limited.

The second threat that may limit generalizing findings beyond the study group is regarding the sampling procedures. Selection bias can make attributing variations in the dependent variable to the treatment rather than differences resulting from group assignment problematic (Frey, 2018). The present study used non-random purposive convenience sampling because random sampling was not possible. To minimize this threat to external validity, students enrolled in the treatment cohort who participated in the FAST-AP literacy pilot program shared comparable fall literacy and socioeconomic demographic profiles at the start of the 2018–2019 school term with the comparison group used to answer Research Question 3. However, the treatment cohort was not matched by fall literacy, demographic, ethnic, and SES profiles to every first-grade cohort in the Study School district. This makes it problematic to generalize results beyond the study school.

The third threat to external validity that potentially limits the present study's findings relates to the interaction of setting and treatment (Meltzoff & Cooper, 2018). Differences in classroom environments, teaching styles, and teachers' attitudes toward promoting active home- and school-based family engagement could make it challenging to attribute statistically significant findings to the treatment. The study used multiple classrooms at the treatment and comparison sites to minimize setting and treatment interaction effects.

Internal validity refers to the degree of confidence that relationships observed between independent and dependent study variables resulted from the study treatment and were not influenced by extraneous variables such as participant maturation (Salkind,

2010). The maturation and expected cognitive growth of study subjects presented a potential threat to the internal validity of the present study. The effects of students' maturation and typical cognitive growth during the intervention period risked the confidence of ascribing differences in changes to continuous text reading scores. A comparison group allows greater confidence in assigning a causal relationship between variables (Frey, 2018). The study design included the use of a comparison group to rule out noncausal explanations.

Significance

FAST-AP utilizes a multi-pronged approach to encourage sustained parent engagement in literacy learning at home. FAST-AP addresses issues of parental role construction for involvement with schools, parental self-efficacy for supporting academic achievement, and combines the salient elements of collective parent engagement (CPE) that promote the development of positive social networks with school-based family training and home-based family literacy activities. There is some evidence to suggest that parent engagement programs similar to FAST-AP may promote parent engagement leading to improvements in student achievement in low SES populations where poor student academic performance is the norm (Paredes, 2017). However, these studies may reflect bias as they focused on one specific parent engagement program and were conducted and published by the program developers.

The proposed study was unique because, although other research has studied the effects of CPE, school-based parent training, and home-based family engagement individually, this research examined a multifaceted family engagement plan that also

addresses parental role construction and self-efficacy and promotes meaningful family-family and family-school partnerships as a means to improve engagement at school-based training and with home-based activities that promote reading achievement. The study has the potential to contribute to the scholarly body of research regarding the specific effects of active parent engagement in FAST-AP on student literacy achievement. The study also contributes to positive social change because of its potential to influence how educators envision family engagement and provide for extended student learning at home. Moving from a view of teachers as experts who dictate the parameters of family involvement in student learning to an emphasis on constructing authentic, collaborative partnerships with families nurtures a shared commitment and accountability to student learning and growth. A paradigm shift in how educators perceive family engagement can empower families and improve family-school relationships. The results of this study may also promote positive social change by informing administrative decisions regarding the equitable allocation of limited resources to increase engagement in schooling for all families and improve student literacy achievement.

Summary

Research suggests the importance of family engagement in improving student achievement. Benefits may include improved academic achievement, higher engagement levels, better attendance, fewer behavior problems, and higher graduation rates. The purpose of this quantitative study was to examine changes to WIF scores after participation in the FAST-AP family engagement pilot program and to examine the effect of parent participation in the FAST-AP pilot program on changes in the continuous text

reading scores of first-grade students from a suburban Title I school in the Northeastern United States. Data points used to answer Research Questions 1 and 2 were Vanderbilt timed and Dolch untimed WIF mean score changes. The independent variable for Research Question 3 was parent engagement in the FAST-AP family engagement pilot program, and the dependent variable was change in continuous text reading scores as measured by F & P BAS assessments.

Sociocultural learning theory (Vygotsky, 1962, as cited in Tharp & Gallimore, 1991) and the emergent literacy framework (Clay, 1966, as cited in Sulzby & Teale, 1991) provided the theoretical framework for this study. This was a quantitative ex post facto study. Descriptive analyses examined changes in students' WIF scores, as measured by timed Vanderbilt WIF probes and untimed Dolch sight word inventory assessments, after participation in the FAST-AP program. An independent samples *t*-test indicated whether there was a statistically significant difference in changes to the continuous text reading scores as measured by the F & P BAS assessment between students whose families engaged in the FAST-AP family engagement pilot program and those who did not.

The literature related to the theoretical framework, which provides the rationale for the research design and informed the study methodology and data analysis, will be presented in Chapter 2. A thorough discussion of parental involvement will include a historical perspective and provide a clear definition of family engagement and the factors that impede and support successful family engagement. A comprehensive family

engagement plan which addresses the essential components of an engaging and quality family engagement plan will be proposed as the basis for this study.

Chapter 2: Literature Review

There is ample research literature to suggest a positive relationship between active family involvement in school and improvements in student academic achievement (Boonk et al., 2018). Low literacy achievement rates have been attributed to low levels of family engagement (Alexander et al., 2017; Brown et al., 2019; Wang et al., 2016) and were the impetus for implementing the FAST-AP family engagement pilot program.

The purpose of this quantitative study was to examine changes to WIF scores after participation in the FAST-AP family engagement pilot program and to examine the effect of parent participation in the FAST-AP pilot program on changes in the continuous text reading scores of first-grade students from a suburban Title I school in the Northeastern United States. I used score changes between pre- and posttreatment assessments from timed Vanderbilt WIF probes and untimed Dolch sight word inventories for the descriptive analyses in this study. For the inferential analysis in this study, the independent variable was parent engagement in the FAST-AP family engagement pilot program. The dependent variable was changes in continuous text reading scores as measured by F & P BAS assessments.

FAST-AP is a multifaceted family engagement program that combines elements of school- and home-based literacy programs shown to be effective in improving student literacy achievement (Hamlin & Flessa, 2018), with other family engagement components intended to develop strong parental role construction and self-efficacy for supporting the development of foundational literacy skills (Hoover-Dempsey & Sandler, 1995; Yamamoto et al., 2016). Additionally, FAST-AP builds in opportunities to develop

adult social relationships that may act to motivate ongoing engagement (Alameda-Lawson & Lawson, 2019). To maximize limited school resources, it is crucial to understand which elements of family engagement programs can be directly tied to improvements in student academic achievement.

The following literature review is composed of four major sections: Literature Search Strategy, Theoretical Foundation, Historical Foundation of Family Engagement, and Defining Family Engagement. I describe the various forms of family engagement along with the benefits of family engagement related to student academic achievement. The literature review also includes a discussion of the common barriers to active and sustained family engagement. Finally, I describe the FAST-AP family engagement pilot program along with the specific ways to address current research about essential components for family engagement.

Literature Search Strategy

I conducted a thorough search of research literature and examined professional books and peer-reviewed journal articles written within the previous 5 years. The search also included seminal works regarding the theory of planned behavior and the effects of family involvement and engagement on student achievement. I included sources falling outside the 5-year range if they provided seminal research or particularly relevant information. The Walden University online library provided access to the following search engines and databases: Google Scholar, ProQuest Central, ProQuest Ebook Central, Education Resources Information Center (ERIC), PsycINFO, EBSCOhost, EBSCO books, Education Source, Sage Journals, Science Direct, and Education Research

Complete. I also accessed information from government websites and from websites containing original works considered seminal regarding sociocultural theory, emergent literacy theory, and the theory of planned behavior. The primary search terms were *family, parent(al), involvement, engagement, participation, student achievement, literacy achievement, student success, barriers, impact, effects,* and *history.* I reviewed more than 300 scholarly articles and identified 150 relevant articles appropriate for this research.

Theoretical Framework

Sociocultural learning theory (Vygotsky, 1962, as cited in Tharp & Gallimore, 1991) provided a general understanding of the social nature of cognitive development. An emergent literacy framework (Clay, 1966, as cited in Sulzby & Teale, 1991) contributed to the study by extending this understanding, providing a detailed description of the relationships between social interactions, a literacy-rich environment, and the development of emergent literacy skills. Together, the theories provided a lens through which the impact of participation in the FAST-AP family engagement pilot program on sight word fluency and continuous text reading could be examined and understood.

Background

According to sociocultural theory, learning and cognitive development are grounded in cultural-historical practices which expose children to practical and cultural tools such as reading, writing, and communicating (Black & Allen, 2018; Veraksa et al., 2016). Through continued participation in social-cultural interactions using oral and written language, students gradually master and assume control of cultural tools (Veraksa et al., 2016). In this way, cognitive development is not informed by a readiness to learn;

instead, it is socially mediated through engaging in cultural practices (Clark, 2018; Smagorinsky, 2013). Higher-order functions develop from proximal interactions between the child and adult within the context of sociocultural experiences (Tharp & Gallimore, 1991; Van Oers, 2020). Vygotsky theorized that human development occurs on two planes; first on an interpsychological plane during interpersonal interactions between people, then on an intrapsychological plane within the child (Clark, 2018; Tharp & Gallimore, 1991; Van Oers, 2020). Development and learning occur most effectively in the ZPD, the space between a child's actual and potential levels of development (Acar et al., 2017; Black & Allen, 2018; Markova, 2017) with support from a more knowledgeable other (Silalahi, 2019).

The roots of the emergent literacy framework can be seen in the early works of Marie Clay (1966, as cited in Sulzby & Teale, 1991) and signaled a break from maturation or readiness views of reading and literacy development (Razfar & Gutierrez, 2003; Sénéchal et al., 2001). The framework is premised on the understanding that children learn from social interactions with more competent others such as parents, siblings, or peers that begin well before formal schooling commences (Sénéchal et al., 2001; Sulzby & Teale, 1991; Teale, 1986). *Emergent literacy* is defined as the earliest phase of literacy development and includes the reading and writing behaviors that precede and lead to conventional literacy (Sénéchal et al., 2001; Sulzby & Teale, 1991). Emergent literacy research stresses the importance of social interactions in developing early literacy and eventual conventional literacy behaviors (Razfar & Gutierrez, 2003; Teale, 1986). From a very early age, children are engaged in social interactions that

present opportunities to engage in literacy activities and exchanges continuously and develop literate behaviors (Clay, 1966, as cited in Sulzby & Teale, 1991). Emergent literacy theory is concerned with the child's individual construction of literacy, social constructions of literacy contributed from the child's social environments, and the interface between them (Sulzby & Teale, 1991). Sulzby and Teale (1991) found conversations to be the source of literacy development and suggested that literacy development is enhanced through purposeful parent-child engagement in literacy activities such as reading together, participating in wordplay, and engaging in other word games.

Zone of Proximal Development

Vygotsky identified the ZPD as the space between what a child can independently accomplish unsupported by others and what a child can accomplish through collaboration with or guidance of a more knowledgeable other (Abtahi et al., 2017; Eun, 2019; Veraksa et al., 2016). Vygotsky used the term *zone* to indicate that development was a continuous process conceptualized as a dynamic region sensitive to instruction rather than a finite point on a scale (Eun, 2019). Vygotsky contended that, for instruction to be effective, it must be ahead of a child's actual developmental level and target learning at their potential developmental level (Eun, 2019; Silalahi, 2019). The ZPD, although not directly referenced in studies of emergent literacy, is evidenced in how adult mediation and child collaboration are positioned. Albuquerque and Martins (2021) suggested that dialogue is a privileged tool that causes a positive disruption to children's emergent literacy knowledge, leading to new knowledge. Therefore, children acquire emergent literacy

knowledge and skills through purposeful engagement in challenging literacy tasks and supportive conversations with adult assistance (Sulzby & Teale, 1991). Jacobs and Usher (2018) suggested that the work learners can accomplish with support is more indicative of their overall development than that in which they demonstrate mastery unassisted. Instruction leads development, as the MKO targets cognitive functions that are ready to be developed through social experiences and appropriate support from a competent partner (Abtahi et al., 2017; Eun, 2019; Silalahi, 2019). The ZPD is inherently uncomfortable for students as they attempt to learn beyond their ability to master without support (Black & Allen, 2018). They must develop trust and be willing to take risks until they can eventually master then internalize emergent literacy tasks, resulting in a new, higher-order ZPD (Chitooran, 2018; Eun, 2019).

More Knowledgeable Others and Scaffolding

Learning within the ZPD is successful because of support and guidance from and collaboration with the MKO (Abtahi et al., 2017). Markova (2017) found that ELLs could only progress when an MKO modeled correct use and pronunciation of vocabulary words. In fact, parental assistance was identified as the most critical factor contributing to emergent reading achievement (Sulzby & Teale, 1991). Teale (1986) found that literacy progress is directly related to social interactions with MKOs. These studies suggest the importance of MKOs in the development of emergent literacy skills and promoting literacy growth.

Through collaboration, modeling, active listening, questioning, and providing explanations, the MKO can guide students' understanding, scaffolding their

understanding and assisting them to achieve more than they could accomplish independently (Black & Allen, 2018; Jacobs & Usher, 2018). The term *scaffolding* was coined by Wood et al. (1976) and referred to the instructional practices employed by more knowledgeable others that provide support within the ZPD until the less competent person can internalize new concepts, skills, or knowledge and begin to perform them unassisted (Acar et al., 2017; Eun, 2019; Wood et al., 1976). The MKO modifies and adapts mediation strategies based on what they know of the less competent learner, adjusting the complexity of the task to help them attain a higher level of learning (Albuquerque & Martins, 2021; Markova, 2017). These intentional behaviors advance the understanding of less competent others and differentiate interventions based on the ZPD and simple transmission models of instruction that use social interactions (Tharp, 1997; Tharp & Gallimore, 1991). Scaffolding serves as a bridge assisting children to move from emergent literacy tasks they can complete independently toward more conventional forms of literacy.

Theoretical Framework Summary

Sociocultural learning theory and the emergent literacy framework provided insight into the social nature of cognitive development and literacy learning. The theories provided a lens through which the effects of family participation in the FAST-AP family engagement pilot program on continuous text reading could be examined and understood. Sociocultural theory and emergent literacy theory also provided a framework for interpreting changes in WIF scores after family participation in FAST-AP.

Sociocultural learning theory (Vygotsky, 1962, as cited in Tharp & Gallimore, 1991) and the emergent literacy framework (Clay, 1966, as cited in Sulzby & Teale, 1991) provided a structure for understanding the social nature of cognitive development and literacy learning in the present study. Both theories also contributed a perspective regarding the roles families and a literacy-rich environment play in supporting emergent literacy development. They provided a lens through which changes in WIF after participation in the FAST-AP family engagement pilot program and the effect of participation on continuous text reading could be examined and understood.

Historical Foundation of Family Engagement

The importance of family involvement in American education is not a modern concept. An understanding of the importance of families in educating children is evident in the early Puritans' practices and throughout American history (Jeynes, 2011, 2014). Evidence of this understanding is seen in the actions of families and schools and in the laws enacted to promote and support family engagement in education. Although the structure of families and the demands of modern society have changed how families are involved, the importance of family involvement has remained stable.

The Massachusetts Compulsory School Law of 1642 legislated that every household head was responsible for providing education for all children in the home (Jeynes, 2011). The home was viewed as the primary source for learning where academic training from school and the church could be applied to the everyday experiences of children's lives within their families and communities (Jeynes, 2014). The family was the

center of learning, and the role of the teacher was to support the family to maximize each children's potential (Jeynes, 2014).

During the 1700s and 1800s, the United States experienced increased urbanization. Families continued to carry the primary responsibility of teaching their children, but many families began to seek the support of tutors (Jeynes, 2014). While the primary emphasis of family involvement was moral and character development, it was believed that schools could now influence and support both the social/spiritual aspects of education in addition to the academic growth of children (Jeynes, 2014). Pestalozzi believed that schools should be maternal places that exhibited sensitivity to the family's concerns to garner parental trust and ensure involvement (Jeynes, 2011). Horace Mann also felt that family/school partnerships were critical for children's moral and intellectual education (Jeynes, 2014). Froebel, who created the concept of kindergarten, believed that family support would maximize children's social and academic potential (Jeynes, 2011). He posited that if schools supported family values and worked in partnership with them, families would be more likely to participate in school-related activities (Jeynes, 2011).

Into the early 1900s, families continued to maintain a strong influence over their children's schooling and, along with the church, made curricular and employment decisions, and set the school calendar (Epstein, 2018). The school was viewed as an extension of the church and family who bore the primary responsibility of teaching children what they would need to succeed as adults (Epstein, 2018). However, as industrialization grew, the family's primacy in educating children began to shift along with it (Jeynes, 2011). Children's education slowly shifted away from the family to

schools as teachers were now viewed as experts in providing students with academic knowledge; families' roles then began to emphasize preparing students for school by teaching them religion and appropriate behaviors and manners (Epstein, 2018). The onus of teaching students was now on the school, and the school increasingly viewed parent involvement as meddling (Jeynes, 2014).

By the mid 20th century, divorce rates were on the rise, and increased numbers of single and married women were entering the workforce, creating barriers to family involvement (Jeynes, 2014). Now federal programs such as Head Start emerged to improve the involvement of socioeconomically disadvantaged families and interrupt the potential for school failure (Epstein, 2018). These programs included mandates for family involvement on advisory boards, in the classroom, and at home and required schools to recognize parents' importance as educators in preschool and beyond (Epstein, 2018; Sebastian et al., 2017). Supporting the resurgence in understanding the need for parent involvement, teacher responses to the 1989 Metropolitan Life Survey of the American Teacher (Markow & Martin, 1989) suggested that increasing the time parents spend with their children engaged in academic or school-related activities was seen as the most critical step toward improving public education.

From the late 20th century to the present, the call for improved and sustained parent involvement in schools persists. Federal policies such as The No Child Left Behind Act of 2001 (2002) and the reauthorization of the 1965 Elementary and Secondary Education Act (Every Student Succeeds Act, 2015) required school districts to improve family engagement. The No Child Left Behind Act of 2001 (2002) mandated the

development of written parental involvement policies and investments in parent training and education programs as a means to improve parental engagement (McCormick et al., 2020; Sebastian et al., 2017). Policies are designed to support disadvantaged populations and stress the shared responsibility of schools and families to promote academic achievement through initiatives that increase family engagement rates (Robinson, 2017). This seemingly straightforward task was complicated by the absence of a shared understanding of what family engagement is and, therefore, how best to promote and sustain it.

Defining Family Engagement

Recognition of the importance of family engagement is evident in modern education policies such as the Goals 2000: Educate America Act (Stedman & Riddle, 1998) and the No Child Left Behind Act of 2001 (2002), both of which mandated school districts craft and enact robust family engagement plans to ensure that all children have access to appropriate public education that is bolstered by their family's involvement. Government policies typically limited definitions of family or parent involvement and engagement to activities that included regularly occurring and substantive communication between families and schools regarding student learning (Dotterer & Wehrspann, 2016). The U.S. Department of Education expanded the narrow focus of parental involvement from a focus on building partnerships between schools and natural parents or legal guardians to include promoting solid ties between families, schools, and the community (Brice, 2014) when it endorsed the dual capacity-building framework for family-school partnerships (Mapp & Kuttner., 2013). This new understanding

emphasized building the dual capacity of families, communities, and schools for engaging in the kind of meaningful collaboration that would position schools as the center of the community and promote positive student outcomes (Ishimaru, 2019).

In general, definitions of parental or family structures created by policymakers have been limited to relationships forged by blood relations, marriage, or legal proceedings; family engagement was similarly limited to participation in students' educational processes or experiences of students taking place in school. Hampden-Thompson and Galindo (2017) expanded the definition of family engagement, describing it as a triad of support that encompassed parents, extended family, and community organizations and included activities that occurred at school and home. Although more inclusive, traditional definitions formulated to describe the various family structures and engagement patterns adequately fail to embrace a comprehensive description of the varied forms of family engagement or a narrative of family strength rather than family deficit. It is crucial, therefore, to frame a definition of family and family engagement that encompasses all the sources of student support which extend from the traditional understanding of "family" to include family friends, neighbors, caregivers, church, or other community groups (Paredes, 2017; Vassallo, 2018). An expanded and more inclusive definition of family engagement incorporates all stakeholders in diverse forms of engagement that occur in school, at home, and in the community. It provides an improved understanding of its specific benefits for academic achievement.

Benefits of Family Engagement

Family engagement has been a strong predictor of academic achievement and other academic success measures, especially from families with low maternal education levels (McDowall & Schaughency, 2017). McDowall and Schaughency found that other risk factors in overall reading achievement are mitigated by family engagement in the early childhood years. The broad forms engagement takes and the individual engagement practices associated with engagement are diverse and confer various benefits (Alexander et al., 2017; Boonk et al., 2018). Educators frequently define parental involvement as behaviors that emphasize school or home activities (Dotterer & Wehrspann, 2016). Discussions may also include programs that synthesize attributes of home- and school-based activities, citing improvements in academic achievement when positive home-school interactions are present (Hampden-Thompson & Galindo, 2017). Still, other educators cite the benefits of collective parent engagement (CPE) programs that utilize culturally inclusive practices that acknowledge the influence on student achievement of the families' funds of knowledge and stress the importance of parent-parent partnerships and (Robinson, 2017; Sebolt, 2018). Research supports the positive relationship between family engagement and student academic and social outcomes. However, the relationship varies according to the student's age and the form of family engagement (McDowall & Schaughency, 2017). A thorough understanding of the elements of each form of family engagement and their benefits to families, students, and schools is essential in making critical policy decisions regarding the initiatives intended to engage families.

Home-based Family Engagement

Home-based family engagement behaviors are demonstrable parent-child interactions and encompass the actions parents take to promote student learning outside of school (Baker et al., 2016; Boonk et al., 2018). Typical home engagement activities include providing homework support or tutoring, reading to and with children, or playing games. This type of home-based engagement is effective because it reinforces school-based learning. Other forms of home-based interactions include reinforcing appropriate school behavior, instilling cultural or spiritual values, promoting relevant academic activities (e.g., engaging in conversations about school, maintaining high academic expectations), or providing other enriching experiences (Vera et al., 2017). Walker (2016) found that parents' communication of high standards and expectations for academics was the most robust predictor of later academic achievement. The conditions and parental tone under which home-based school support occurs, more than disseminating knowledge and specific skills, affect academic achievement (Walker, 2016). Doctoroff and Arnold (2017) found that homework assistance in the form of autonomy support improves student self-efficacy, skill acquisition, and motivation, while homework assistance in the form of parental control is associated with the development of goal orientation but not improvements in academic achievement. Hamlin and Flessa (2018) found that home-based parent involvement behaviors, including shared reading and parent-child communications about school, had the most potent effects on student outcomes. The benefits of home-based learning are especially critical for young students

who lack appropriate school readiness skills and are already at risk for poor school performance (McCormick et al., 2020).

School-based Family Engagement

Traditional school-based and school-centered involvement include participation in parent-teacher conferences and attendance at school-based events such as open house and school governance meetings. Many school-based family engagement activities are unidirectional and frequently overlook more subtle expressions of involvement typical of home-based engagement behaviors that are difficult to measure (Alexander et al., 2017). Petridou and Karagiorgi (2018) suggested that these engagement activities have a modest effect on student achievement compared to the support students receive from their families at home.

Research suggests that engagement programs that combine school-based training for effective parental support from home are more closely associated with student academic achievement (Park & Holloway, 2017). School-based family engagement initiatives had positive effects on student performance, particularly when they included aspects of promoting involvement from home. Hybrid family engagement programs combine school-based workshops and training for strengthening critical foundational skills at home. These programs may have a greater impact on student achievement than engagement programs focusing solely on school- or home-based engagement behaviors (Crosby et al., 2015; Hamlin & Flessa, 2018; Portwood et al., 2015). In addition to improvements in literacy achievement, the benefits of hybrid programs include improvements in preschool students' language development (Brown, 2016; Fagan et al.,

2016). However, the school-based component of hybrid engagement programs may present barriers to many families, making it less effective in improving academic achievement (Hornby & Blackwell, 2018; Vassallo, 2018).

Collective Parental Engagement (CPE)

Collective parent engagement initiatives promote social networks among parents and families within the school community. CPE has been shown to reduce parent engagement barriers, improve parental motivation to become involved in school, and improve academic achievement (Alameda-Lawson & Lawson, 2016, 2019). CPE focuses on parent-parent interactions that promote the development of social networks and allow for the social construction of family engagement knowledge (Alameda-Lawson & Lawson, 2016, 2019). It highlights community involvement and the importance of the cultural and ecological factors that influence individual behavior (Smalls Glover et al., 2019). Ecologies of parental engagement emphasize the roles of parental, aspirational, and family capital and frame parent engagement in terms of an intersection of these factors rather than the result of any in isolation (Alameda-Lawson & Lawson, 2019). At the individual level, CPE suggests the importance of engagement plans that promote essential social ties, especially for parents from nondominant groups who may experience isolation (Alameda-Lawson & Lawson, 2019). Improvements to individual families' understanding of effective achievement support strategies are socially structured through these social ties (Brown, 2016). At the collective level, the groups' strengths affect institutional improvements that impact academic achievement for all students (Alameda-Lawson & Lawson, 2019). Alameda-Lawson and Lawson (2016, 2019) suggested that the

transformative effects of CPE on student achievement are most evident when integrated with other family engagement initiatives.

The positive relationship between family engagement and academic achievement is undeniable. Effective family engagement practices fall along a continuum of behaviors and are associated with a range of benefits for students and their families, schools, and the larger community (Hornby & Blackwell, 2018). The benefits are not limited to specific improvements in academic achievement. Students enjoy improved school behavior and lower absenteeism (Baker et al., 2016; Barger et al., 2019; Dotterer & Wehrspann, 2016). Other benefits of parent involvement linked to indicators of student achievement include teacher ratings of student competence and higher grades (Walker, 2016). Family engagement is also associated with school success indicators, such as lower rates of retentions and drop-outs, higher participation rates in advanced academic courses, and college enrollment (Degol et al., 2017; Latunde & Clark-Louque, 2016; Walker, 2016). Student self-efficacy for learning, mastery orientation, and perceived control over school outcomes are psychological processes and attributes that are particularly susceptible to parent and teacher influence, are seen as the byproducts of family engagement (Dotterer & Wehrspann, 2016). Doctoroff and Arnold (2017) found that parental autonomy support versus parental control regarding homework promoted academic self-efficacy, motivation for learning, mastery goals, and skill acquisition, leading to improvements in academic achievement.

The benefits of specific forms of family involvement on academic achievement do not generalize across all forms of engagement and all student groups. Barriers to

family engagement pose challenges for being involved at best and, at worst, impede family participation altogether. It is vital to understand the barriers to family engagement and how they impact engagement behaviors to allow educators to craft engagement opportunities that provide adequate support for families and students.

Barriers to Family Engagement

Hornby and Blackwell (2018) acknowledged that, although parent involvement is a robust predictor of student achievement, families fail to engage for various reasons. Barriers act to constrain family engagement and fall into two broad categories (Mendez & Swick, 2018). Structural barriers are external circumstances that impede involvement and may include a lack of immigration status (Crawford, 2017), access to childcare, schedule conflicts with work or other obligations, transportation, family make-up, or a lack of financial resources. Attitudinal barriers are associated with internal sources of conflict (Mendez & Swick, 2018). Examples of attitudinal barriers include perceptions of a welcoming school climate, parental beliefs regarding students' needs, parents' knowledge of subject material, parental ability to support increasingly challenging homework, and language barriers. The presence of structural and attitudinal barriers predicts lower family participation rates, especially for families from nondominant ethnic or language groups, or families with lower SES and education levels (Alexander et al., 2017; Crawford, 2017; Hamlin & Flessa, 2018).

Gonzales and Gabel (2017) found that traditional parent engagement programs are often premised on deficit theories and school-centric practices that privilege white, middle and upper-class families. They fail to address the unique needs of families from

culturally, linguistically, and economically diverse backgrounds. Instead, family engagement programs often provide one-size-fits-all experiences that position schools as experts, ignoring families' particular needs and strengths and attempting to assimilate them into unresponsive school systems (Ishimaru, 2019). A lack of familiarity with school culture and expectations, communication difficulties, and deficit attitudes that embrace a restrictive definition of behaviors that constitute family engagement act to limit nondominant and low-income families' participation in school-based activities (Hamlin & Flessa, 2018). The resulting cultural dissonance has been identified as a determinant in family engagement patterns, particularly of Black families (Latunde & Clark-Louque, 2016).

In conjunction with the effects of schools' deficit views of nondominant families, Gonzales and Gabel (2017) attribute institutional racism and classism with broadening the cultural disconnection between schools and families. Schools have historically favored engagement activities that appeal to educated, upper-middle-class white families (Gonzales & Gabel, 2017). Additionally, some forms of parent engagement require investments of time or finances, which may preclude some families from becoming involved in school-based events (Hornby & Blackwell, 2018). Families from nondominant cultural, language, and economic groups may be uncomfortable engaging in school-based activities and risk being undervalued as partners in their children's learning (Vera et al., 2017). Although they often engage in supportive behaviors outside of school, such as setting high expectations and engaging in conversations about school, these are difficult to observe or measure. Schools view lower rates of school-based engagement,

then, as a lack of motivation and desire, adding to the risk of being labeled as uninvolved or uninterested in their children's education (Alexander et al., 2017; Gonzales & Gabel, 2017; Vera et al., 2017). Schools view lower family engagement rates as a lack of motivation and blame families for not doing their part to support student achievement, rather than acknowledging the existence of bona fide, unaddressed barriers and adjusting pedagogical practices (Gonzales & Gabel, 2017; Hamlin & Flessa, 2018). Lower levels of family participation further fuel teachers' deficit views of minority and low SES families and can result in a more profound disconnect between schools and families.

Despite well-intentioned efforts to improve family engagement in school, perceived and actual barriers may contribute to low levels of family engagement. School-based initiatives must be developed intentionally to address the needs of all students to reap the academic and social-emotional benefits of family involvement. FAST-AP addresses many persistent barriers to family engagement and provides families with appropriate support for ongoing communication about their children's school performance, opportunities for culturally responsive family-school-community collaboration, and essential tools and resources for families to experience success.

FAST-AP Theory

Ajzen's (1985) theory of planned behavior (TPB) provided a means for understanding how families decided to become or not become engaged in the FAST-AP family engagement program. The theory helped predict under which conditions parents were more likely to become engaged in the FAST-AP pilot program and informed decisions regarding the inclusion of specific program elements hoped to influence

parental behavior toward becoming actively engaged in the program. Hoover-Dempsey and Sandler's (1995) model for parent engagement provided a deeper understanding of the critical elements of parent engagement programs that promote improved family involvement. Both theories informed decisions regarding specific elements of the FAST-AP family engagement pilot program.

The Theory of Planned Behavior

The theory of planned behavior provides a useful model for understanding, predicting, and changing social behavior, showing larger study effects than interventions based on other theories (Ajzen, 2012b; Rowe et al., 2016). TPB has been applied to various health interventions that have shown larger study effects than interventions without a theoretical foundation or based on other theories (Cooke et al., 2016; Rowe et al., 2016). TPB posits that behavioral actions are preceded by intentions to perform or not to perform them (Ajzen, 1985). A behavioral intention, found to be the strongest predictor of behavior, is the immediate antecedent of a behavioral action (Girardelli & Patel, 2016; Steinmetz et al., 2016). Behavioral intentions are the function of three determinants: attitude toward the behavior, perceived subjective norms, and perceived behavioral control (Ajzen, 2012a; Girardelli & Patel, 2016). Behavioral, normative, and control beliefs provide the bases for and interact with these motivational variables to influence the formation of intentions (Ajzen, 2012b; Steinmetz et al., 2016).

Behavioral Beliefs and Attitudes Toward Behavior

Behavioral beliefs are accessible beliefs about the likely consequences or costs associated with carrying out the target behavior (Ajzen, n.d.). Behavioral beliefs, in turn,

contribute to the formation of attitudes toward the target behavior in direct proportion to the strength of the behavioral beliefs (Ajzen, 1991). Attitudes toward a target behavior may be instrumental, relating to perceptions of the positive or negative consequences of the behavior, or experiential, relating to the anticipated positive or negative feelings associated with the behavior (Girardelli & Patel, 2106). Therefore, attitudes toward the target behavior encompass positive and negative beliefs about performing or not performing a behavior. Cooke et al. (2016) found that attitudes toward behaviors had the most robust relationship with intentions. When applied to decisions about involvement in their children's schooling, it could be expected that parents who believe it is vital to be actively involved in school intend to become involved. Conversely, one may predict that parents who believe that teaching is best left to professionals intend not to become involved in school.

Normative Beliefs and Subjective Norms

Normative beliefs are accessible beliefs about the expectations of important others (Ajzen, 2012a). One's motivation to comply with normative expectations results in perceived social pressures know as subjective norms (Steinmetz et al., 2016). Subjective norms may be injunctive and related to perceptions about behavior that ought to or should occur, or descriptive and related to perceptions of the important others' behavior (Girardelli & Patel, 2016). Subjective norms result in social persuasion or pressure to engage/not engage in the target behavior based on perceptions of the approval or disapproval of important others such as spouses, family, or friends (Hendricks, 2016; McGregor & Knoll, 2015). Parents influenced by important others who are routinely

engaged in their children's schooling will likely develop an intention to become involved in schooling. In contrast, parents who lack positive role models or whose important others do not become involved in their children's schooling are likely to develop an intention to become similarly uninvolved (Yamamoto et al., 2016). The role of subjective norms in influencing decisions about behavior underscores the importance of providing families with opportunities to forge strong social ties with the school. Individuals or groups can become positive peer models and important others and influence intentions to become actively involved in their children's schooling.

Control Beliefs and Perceived Behavioral Control

Perceived behavioral control, linked to self-efficacy, refers to an individual's perception of their ability to perform a behavior or sequence of activities (Ajzen, 2002). Control beliefs are antecedents of perceived behavioral control. Control beliefs related to capacity are the accessible beliefs about the presence of internal or external factors acting to impede or facilitate the performance of the target behavior (Ajzen, 2012a; Girardelli & Patel, 2016). Control beliefs related to autonomy are perceptions that obstacles to carrying out the target behavior can be overcome (Ajzen, 2012a; Girardelli & Patel, 2016). Perceived behavioral control is a proxy for actual control, which moderates the effects of intent on the performance of social behavior (Steinmetz et al., 2016). Related to the intention to become engaged in their children's schooling, parents who may lack volitional control yet believe they have the capacity to manage barriers and perform target behaviors are more likely to persevere and succeed (Ajzen, 2012a).

Mediating Variables

Four variables act to mediate the relationship between behavioral intent and the performance of target behavior: beliefs about others' attitudes toward the target behavior, one's motivation to meet the expectations of important others, one's actual control over barriers that may impede the performance of the target behavior, and feedback from previous behavioral attempts (Ajzen, 2012b, 2015). The strength of normative beliefs is weighted by one's motivation to comply with important others (Ajzen, n.d.). Although subjective norms were insufficient in predicting parental involvement with homework, they were significant predictors in parental involvement with conferences and teacher contact and attendance at school activities and events (Girardelli & Patel, 2016; McGregor & Knoll, 2015). When subjective norms created a perceived moral obligation, they made a significant contribution to predicting behavioral intention (Ajzen, 1991). Perceived moral obligation also increased perceived social pressures and, in turn, influenced individual motivation to meet the expectations of important others (Ajzen, 2002, 2012a).

Ajzen (1985) found that when control is high, one's intention is sufficient to predict whether the behavior will be performed. Perceptions of control may influence attitudes, which were found to have the most robust relationship with intentions and, in turn, behavior (Cooke et al., 2016). When the intention to perform a behavior is strong, new information about possible adverse outcomes is insufficient to reverse the planned course of action (Ajzen, 1985). However, as the time to perform a behavioral action draws near, negative beliefs about potential outcomes become more salient (Ajzen,

1985). Self-efficacy becomes an important variable that informs one's choice to perform the behavior, the effort directed toward performing the behavior, and the amount of preparation one engages in prior to performance of the target behavior (Ajzen, 1991).

Hoover-Dempsey and Sandler's Model of Family Involvement

Hoover-Dempsey and Sandler's (1995) model for parent involvement provides answers to why and how parents choose to become involved in schooling and the specific effects of parental engagement on student achievement. The model is structured in five sequential levels, linking motivations for engagement with various parent involvement forms (Level 1), learning mechanisms in which parents engage during incidences of involvement and which are mediated by students' perceptions (Levels 2 and 3), and ways parental involvement behaviors and student perceptions interact to influence student outcomes (Levels 4, 5) (Walker, 2016). Level 1 of this model includes personal psychological and contextual variables from three overarching sources that contribute to parental motivation for school involvement and explain 39% and 49% of the variance in forms of home- and school-based engagement behaviors, respectively (Yamamoto et al., 2016). These constructs include motivational beliefs which are influenced by parental role construction and self-efficacy; contextual variables including parents' perceptions of general and specific invitations from school, teachers, and children to become involved; and perceived life context variables which include parental knowledge and skills, time and energy, and family culture (Walker, 2016; Walker et al., 2011).

Parental Role Construction

Parental role construction is a critical element in predicting parental involvement in schooling and is related to parental beliefs and understanding about their role in their children's education (Bubic & Tosic, 2016; Hoover-Dempsey & Sandler, 1995; Yamamoto et al., 2016). Role construction is based on ideas parents hold about what they are supposed to do to support student learning. Because it is socially constructed and influenced by the modeling and the expectations of important others, it is subject to change over time (Hoover-Dempsey et al., 2005; Yamamoto et al., 2016). Yamamoto et al. suggested that parental role construction functions as a motivator for becoming involved because it allows parents to imagine how they can become involved and anticipate how they might respond to activities related to their children's academic success. Parental role construction, therefore, informs parental attitudes toward academic activities and influences the forms of involvement they choose (Walker et al., 2005; Yamamoto et al., 2016). Parents with a strong role construction for school involvement are more likely to be involved in school than parents whose role construction for involvement is less active (Curry & Holter, 2019). Social relationships with other parents may result in the development of networks that act to mitigate feelings of disconnection between parents and schools that are typical in high poverty schools (Curry & Holter, 2019).

Parental Self-Efficacy

Self-efficacy is defined as a person's beliefs about their capability to act in ways that will produce the desired outcome (Yamamoto et al., 2016). Positive self-efficacy is

associated with increases in motivation, enhanced persistence and engagement even with challenging tasks, and the ability to work with intensity for extended periods (Hendricks, 2016). Self-efficacy and perceptions of competence are potent motivators that promote task persistence and predict decisions to change behavior (Bandura & Adams, 1977; Hendricks, 2016). Bandura and Adams suggested that personal self-efficacy beliefs are socially constructed and have four sources: past performance accomplishments, vicarious experiences, social persuasion, and physiological and emotional states. Past positive direct experiences from their schooling or previous successful attempts to support student achievement are likely to improve efficacy for parent involvement (Hoover-Dempsey & Sandler, 1995). Positive vicarious experiences of school involvement, particularly those of important others, contribute to efficacy for helping children (Hoover-Dempsey & Sandler, 1995). Verbal persuasion and emotional arousal also contribute to improvements in efficacy for helping children, especially if the children's success is in question or if one's sense of adequacy is emotionally tied to successfully helping the child to experience success (Hoover-Dempsey & Sandler, 1995).

Parents who believe their involvement will make a difference and feel competent to support student learning are more likely to take on involvement tasks and persist in challenging situations (Hoover-Dempsey & Sandler, 1995; Walker et al., 2005; Yamamoto et al., 2016). Bubic and Tosic (2016) found that parental self-efficacy predicted specific types of homework involvement, such as modeling effective strategies and reinforcing their children's homework efforts. The benefits for students of parental

engagement suggest the importance of providing parents with domain-specific guidance for developing strategies that build efficacy for supporting student learning.

Perceptions of Invitations

Perceived invitations for involvement convey that parental involvement in student learning is desirable, valuable, and expected and is especially crucial for motivating parents with passive role construction or weak self-efficacy for supporting student achievement (Smetzer-Anderson & Roessler, 2016). General school invitations include a welcoming school climate, encouraging and responsive school personnel, or other broad attributes and activities that communicate the message that parent involvement with student learning is welcome (Walker et al., 2005, 2011; Yamamoto et al., 2016). Specific teacher invitations communicate the value teachers attach to parental involvement and its contribution to student academic success (Hoover-Dempsey et al., 2005). Hoover-Dempsey and Sandler (1997) found that parents were more positive about school and experienced higher involvement when teachers made regular invitations for parent involvement. Teacher invitations predicted engagement in cognitive and school-based engagement activities, especially for mothers (Yamamoto et al., 2016).

Implicit and explicit invitations from students result in stronger emotional arousal and increased parental involvement (Colgate et al., 2017). Implicit invitations result from observations of student characteristics or experiences and have a strong effect on engagement in home-based activities (Colgate et al., 2017). For example, parents are likely to take time to engage in alphabet games or activities if they notice their child is struggling with letter-sound identification. Explicit invitations are direct expressions of

either a need or opportunity for engagement and have a strong effect on home and school engagement (Colgate et al., 2017). McDowall and Schaughency (2017) found explicit invitations had the strongest influence on school-based family engagement. Regardless of their source, invitations for engagement strongly influence the parental choice of involvement forms and are especially effective when parental perceptions of time and energy are optimal (Smetzer-Anderson & Roessler, 2016).

Perceived Life Context Variables

Life context variables are perceptions of specific skills and knowledge parents have for supporting student learning or the time and energy parents believe they can devote to involvement activities (Fan et al., 2018; Lechuga-Peña et al., 2019). Skills and knowledge form a set of personal resources that specifically affect the forms of engagement parents select (Fan et al., 2018). For example, parents who feel they are knowledgeable about math may be more comfortable helping with math homework or supporting students in the classroom with math activities. Parental knowledge and skills may lead to eventual decreases in involvement in older children, however; when schoolwork becomes more demanding, parent knowledge and skills may become insufficient to provide adequate math support (Hornby & Blackwell, 2018; Walker et al., 2011). Additionally, parents who lack extensive education may feel uncomfortable communicating with school personnel or feel they do not fit in at school events (Brown, 2016; Gonzales & Gabel, 2017; Ishimaru et al., 2016; Walker et al., 2005). Perceptions of time and energy effect when and in what forms parents engage in their children's schooling (Baker et al., 2016). Parents reported time and energy as significant barriers to

being involved in their children's schooling, particularly if they had inflexible work schedules or multiple child-care responsibilities (Alexander et al., 2017; Lechuga-Peña et al., 2019). Perceived deficits of time and energy were most specifically related to decreased school-based involvement (Lechuga-Peña et al., 2019). While research has studied the effects of life context variables on family engagement as individually occurring barriers, the degree to which they interact presents a more accurate understanding of their effects on family engagement (Fan et al., 2018).

FAST-AP Theory Summary

The theory of planned behavior provides educators with an understanding of the personal and social determinants of behavioral intentions that may lead to the performance of target behaviors (Ajzen, 1985). The Hoover-Dempsey and Sandler (1995) model of parent involvement addresses specific motivational beliefs and contextual variables that contribute to parental motivation to become involved in their children's schooling. Together, the theories provided a comprehensive understanding of critical motivational and behavioral determinants that are amenable to intervention and can assist educators in developing and implementing family engagement programs that promote high levels of family participation and student achievement. Hoover-Dempsey and Sandler's (1995) model for family engagement complemented the theory of planned behavior (Ajzen, 1985) and informed study decisions from program development through data collection and analysis.

The FAST-AP Program

The FAST-AP family engagement program is a family engagement model that promotes academic collaboration between families and schools. It is unique in its synthesis of parent involvement research and stakeholder feedback to inform decisions regarding the inclusion of each element of the family engagement program, from the structure of school- and home-based activities, invitations for parent involvement, and routine home-school communication. The FAST-AP family engagement program provides a structure for forging and maintaining strong academic partnerships between families, who are essential members of their student's teaching/learning team, schools, and the school community. FAST-AP is also a vehicle for promoting solid social ties among families within the school community, an essential component for improving family involvement and school climate (Alameda-Lawson & Lawson, 2016, 2019; Povey et al., 2016).

FAST-AP was designed to include social engagement opportunities with school personnel and other families to promote parental role construction and self-efficacy for active school engagement. Parents receive updated reading data to stay informed about their children's progress toward mastery of foundational literacy skills. Families also receive differentiated learning activities and materials to support literacy growth from home. In each family's preferred language, school-to-family communication makes explicit connections between the work students do in school and its relationship to home-based learning activities. FAST-AP is culturally responsive in its inclusion of elements to mitigate subtractive schooling practices with intention. Each family's unique

contributions to their children's schooling are recognized and celebrated (Gonzales & Gabel, 2017). The FAST-AP philosophy is premised on the assumption that student outcomes are a shared obligation of schools and families and that, in addition to some traditional aspects of family engagement, previously unrecognized forms of home-based engagement are equally valuable in promoting academic achievement.

Family Meetings

The FAST-AP family engagement program offers two types of optional training meetings. These are scheduled to intentionally coincide with morning drop-off or evening pick-up from the extended day program, allowing families to select activities that suit their schedule. It is important to note that, although attendance at family events is strongly encouraged, the inability to attend does not impair active engagement in home-based learning activities. Optional family meetings are formatted as family group conferences (FGCs), which research has suggested are useful in improving family involvement (Argentin et al., 2016). They allow opportunities for cross-cultural interactions and the incremental formation of relationships that may contribute to parental role construction and self-efficacy for school engagement and may also become resources outside of the school setting (Smetzer-Anderson & Roessler, 2016).

Monthly BreakFAST meetings begin 30 minutes before the start of the school day, allowing working parents the potential to drop in on their way to work. Meetings end approximately 40 minutes into the start of the school day. These are informal, drop-in gatherings during which all family members and students learn new literacy activities. They provide the opportunity for interaction with school personnel and with one another

and allow time and space to foster essential relationships within the classroom community. Families receive current data related to their children's progression along the literacy achievement continuum and new learning activities and materials to support student literacy development from home. Additionally, BreakFAST meetings prioritize the importance of repetition and repeated practice of learning activities to support mastery and provide models for effective student support and appropriate miscue correction. (Paredes, 2017; Smetzer-Anderson & Roessler, 2016).

Three school-based family socials are held in the evening and provide families information about grade level foundational skills and ways to support their children's progress toward mastery. Evening socials provide another opportunity to receive support from teachers and other parents with home-based learning materials and celebrate student achievement. The informal structure of evening socials also provides opportunities for families to engage with one another and develop relationships that may promote stronger ties to the school and improve the likelihood of home-based and school-based involvement (Lingwood et al., 2020).

In addition to informal social gatherings, two SMART goal-setting meetings that replace traditional report card conferences provide families with individual support and feedback. Families and teachers collaborate as academic partners to review current benchmark data and set literacy SMART goals for target foundational skills. Each SMART goal includes an action plan developed in collaboration with families intended to guide and promote family engagement at home.

Homework

Homework is generally understood to include learning tasks assigned by teachers and completed at home. It is widely used and intended to improve achievement by increasing student self-efficacy and motivation through repeated skill practice, promote independent problem-solving skills, and assist in developing effective study habits (Doctoroff & Arnold, 2017; Rosário et al., 2018; Silinskas & Kikas, 2019). However, homework does not intrinsically enhance student performance (Dettmers et al., 2019). Its effectiveness is impacted by variability in the methods parents utilize when supporting homework and their perceptions about the purposes and quality of homework assignments (Dettmers et al., 2019; Doctoroff & Arnold, 2017; Rosário et al., 2018; Silinskas & Kikas, 2019).

Variability in homework support methods influences whether homework contributes to or hinders learning outcomes and relates to parental behaviors that emphasize student autonomy or parental control (Doctoroff & Arnold, 2017). Homework autonomy support includes behaviors that scaffold learning and encourage appropriate cognitive struggle, whereas parental control may limit student effort and provide a higher level of support. Autonomy support correlates positively to academic outcomes (Doctoroff & Arnold, 2017). Parent and student perceptions regarding the purposes of homework activities contribute to understanding the curricular goals, thus increasing parents' and students' engagement in homework activities (Rosário et al., 2018). Likewise, the perceived quality of homework assignments contributes to motivation to complete homework tasks (Dettmers et al., 2019; Silinskas & Kikas, 2019). Perceptions

of homework purposes and the overall quality of assignments are directly linked to parent and student motivation to engage in and complete homework activities and learning outcomes.

FAST-AP home-based literacy activities are game-based and designed for use by families to promote the acquisition and development of grade-level foundational literacy skills. Game-based approaches to literacy learning effectively improve motivation and increase sight word vocabulary (Gibbon et al., 2017). When combined with immediate and supportive miscue correction, games can provide a pleasurable activity for remediation, especially for students with learning difficulties (Gibbon et al., 2017; Grünke, 2019; Lämsä et al., 2018). Research has suggested that sight word games contribute to improvements in sight word fluency and decreased errors, which may be responsible for improvements in student self-efficacy (Davenport et al., 2019; Lämsä et al., 2018) while providing sight word learning (Lämsä et al., 2018). The theory of automatic word processing has suggested a strong relationship between automatic sight word reading and fluency, considered to be a foundation skill related to text comprehension (Grünke, 2019). FAST-AP literacy games, then, increase both sight word fluency and support the comprehension of whole text reading.

FAST-AP home-based literacy activities consist of differentiated games intended to engage families in sustained homework behaviors in addition to educational benefits. Research has suggested that families and students perceive a negative impact of homework on family life (Dotterer & Wehrspann, 2016). FAST-AP games are meant to enhance family time by providing opportunities for family members to interact in

informal ways that are pleasurable yet beneficial for student literacy achievement. Research recognizes the benefits to student language skills when families are engaged in schooling (Barger et al., 2019; Dotterer & Wehrspann, 2016; Fagan et al., 2016). FAST-AP games allow for a range of adult-child language interactions that are likely to support a range of student language skills.

Programmatic Response to Research

Teachers and administrators cite commonly occurring problems with traditional family engagement programs, such as low attendance rates or insufficient family follow-through at home with recommended interventions (Gerzel-Short, 2018; Vassallo, 2018). Researchers have identified parental role construction and self-efficacy for being involved in schooling and perceptions of invitations for involvement as highly influential factors in parents' decisions to become involved and remain involved in their children's schooling (Walker, 2016; Yamamoto et al., 2016). The components of the FAST-AP family engagement program were included to address these critical factors specifically.

FAST-AP and Parental Role Construction

Despite the generally accepted assumption that children spend more time in school than with their families, during a typical school year, students spend only about 12% of their non-sleep time in school (Paredes, 2017). FAST-AP works to dispel the myth that families have less access to students and, therefore, may be less influential in student academic outcomes and impress upon families the importance of their roles in their children's literacy achievement. The critical role of families in influencing students' academic outcomes and the school's desire to forge and maintain strong ties to each

children's family are central messages of the FAST-AP family engagement program. These ideals are communicated at every school event, in every written communication, and in every phone or personal contact with families to reinforce the importance of their roles in supporting their children's academic success.

FAST-AP and Parental Self-Efficacy

Parents approach schools with varying levels of self-efficacy regarding their ability to help their children succeed at school. FAST-AP provides families with multiple opportunities for group and individual training and support. Activities address foundational skills and include simple, explicit instructions (translated in multiple languages) and the materials needed to use each activity. Students are joined in the classroom by their families and practice learning activities before they are sent home to ensure that even families unable to attend meetings can experience success. Baker et al. (2016) suggested that increased family engagement and improvements in the quality of home-school communication result in improvements in parental self-efficacy. Engagement in FAST-AP school-based meetings is intended to increase parents' feelings of confidence in supporting students' literacy achievement.

Perceived Opportunities for Engagement

Parents have numerous opportunities to attend school-based FAST-AP events. Families are afforded opportunities to participate in self- and teacher-initiated phone contacts to receive information specific to student achievement or for additional training and support for the use of FAST-AP literacy activities at home. Invitations to all FAST-AP events come from a variety of sources. Teachers, paras, office personnel, Family

Resource Center staff, PTA, and administrators all participate in the FAST-AP team and may extend multiple invitations to families. However, the most influential invitations come from the students themselves. Research indicates that the emotional load of student-generated invitations and those from 'important others' are highly persuasive and more likely to be effective than those coming from the school (McDowall & Schaughency, 2017). Students enjoyed their work during the monthly BreakFAST Meetings and were highly motivated to extend irresistible invitations for upcoming meetings. Research recognizes the importance of culturally responsive social connections in sustaining family engagement (Lingwood et al., 2020; Smalls Glover et al., 2019). FAST-AP intentionally provides opportunities to foster the development of parents' social relationships and extends invitations from multiple sources.

Addressing Barriers to Involvement

Research has shown that individual parent or family factors and child factors interact with teacher and school factors to create barriers that prevent families from being actively involved in their children's schooling (Fan et al., 2018; Hornby & Blackwell, 2018; Naqvi et al., 2015). Although many family engagement plans address these factors independently, the FAST-AP family engagement program acknowledges their interrelatedness. It employs targeted, high-leverage activities that mitigate the effects of barriers to improve the likelihood that families can become and remain engaged. The FAST-AP family engagement program components—school-based family meetings, data sharing between families and schools, and home-based learning activities—are few to

support the ease of implementation at the school level. However, they are broad enough to address the interrelated factors that contribute to barriers to involvement.

School-Based Family Meetings

Attendance at school-based meetings may present barriers for families due to transportation, scheduling or time conflicts, childcare, or language differences contributing to a lack of understanding invitations for involvement or the objectives of school events and home learning activities (Hornby & Blackwell, 2018). FAST-AP meetings are scheduled at varying times to accommodate different family schedules, and attendance of all family members is encouraged. The FAST-AP informational materials, invitations, and home-based materials are provided to families in their preferred languages. Interpretation services are available at all meetings, allowing families of non-dominant languages to feel welcomed and supported at school-based family meetings. Additionally, invitations are extended from various sources to improve motivation to attend (Colgate et al., 2017; Smetzer-Anderson & Roessler, 2016).

School-based meetings encourage parents to socialize and develop relationships that may become important influences for continued participation in FAST-AP or other school activities (Ajzen, 1991, 2002; Hoover-Dempsey & Sandler, 1995; Lawson & Alameda-Lawson, 2012; Lingwood et al., 2020). They also provide an opportunity to develop experience and gain comfort with home-based activities, which may increase family involvement and school performance (Dettmers et al., 2019). School-based meetings, therefore, are a critical component in supporting family engagement; however, attendance at school-based meetings is not essential for families to experience success in

using literacy activities to promote student achievement. Activity instructions are simple to follow, written in the languages spoken in students' homes, and include links for video demonstrations and steps for additional support from the school.

FAST-AP is inclusive and encourages participation by the *important others* interested and available to promote student achievement. In addition to parents, FAST-AP invites siblings, extended family, neighbors, family friends, or others to attend school-based activities and participate in home-based learning activities. Family structures are unique, and duplicate sets of home-based learning activities and materials are provided to each student's extended support people to promote active engagement from a wide network of support.

Data Sharing

The development of effective family-school partnerships is critical in creating a welcoming school environment and promoting family engagement (Baker et al., 2016). FAST-AP equips parents with a clear understanding of the progression of grade-level foundational skills and provides actionable information regarding their students' progress toward the mastery of target foundational skills. Research has suggested that informed parents meaningfully contribute to discussions about their children's social/emotional and academic skills and needs (Sanzone et al., 2018). SMART goal meetings support a deep understanding of achievement data and contribute to developing a common language, promoting ongoing family-school dialogue and student academic success (Jeffco Research and Assessment Design, 2016). Parents are positioned as experts desirous and capable of contributing to a community of practice in meaningful ways. Collaborative

interactions recognize families' funds of knowledge and invite bidirectional communication to improve motivation, increase family engagement, and promote student literacy achievement (Dettmers et al., 2019; Sanzone et al., 2018). The FAST-AP family engagement program facilitates meaningful family-school communication and authentic collaboration around student data to make schools a welcoming place for students and their families.

Home-Based Learning Activities

The FAST-AP family engagement program provides families with home learning activities that are differentiated and engaging. Each activity includes all the tools needed to support student mastery from home. Instructions are easy to follow and provide suggestions to increase/decrease the complexity to better meet student needs. Detailed instructions and a parent page, which provides tips for correcting common student errors in ways that promote reflection and self-correction, are available in each family's preferred language, accompany every activity. When available, video links that model tips are also included. Instead of traditional homework activities, which parents often perceive as negatively impacting family time (Dettmers et al., 2019), FAST-AP home-based literacy activities preserve precious family time by providing learning activities that can be used and enjoyed by the whole family.

Students experience many benefits from using home-based FAST-AP literacy activities. First, the daily practice of target skills using high-quality activities allows students to experience increasing success and improves academic confidence (Rosário et al., 2018). Second, unlike traditional homework, which is typically completed

independently, home-based FAST-AP literacy activities are designed to be used with important others, such as siblings, neighbors, or other family members. “Doing homework” becomes a social time that students and their families can look forward to and enjoy, contributing to task persistence and improvements in achievement (Silinskas & Kikas, 2019). Gibbon et al. (2017) suggested that card and board games used to learn sight words were more engaging and motivating and advanced students’ oral reading proficiency two times faster than traditional instructional methods. Sight word selection is based on incremental rehearsal, or the gradual folding in of new words with recently mastered words to improve long term-mastery and retention (Taylor et al., 2018). Finally, the development and selection of FAST-AP home-based literacy activities were predicated on language acquisition and development research, which has suggested that students from low SES backgrounds lag behind their peers in academic language and vocabulary acquisition (Fagan et al., 2016). Lower levels of oral language skill in students from low SES and language minority backgrounds were evident on measures of language processing, language comprehension, and language production, with the gap between low SES and language minority students and their peers becoming wider as students age (Barger et al., 2019; Fagan et al., 2016). Students from low SES and language minority backgrounds are at a distinct disadvantage for learning achievement (Barger et al., 2019; Fagan et al., 2016). FAST-AP literacy activities provide families with a structure for social interaction that encourages discourse and models for instruction and error correction, which may compensate for low parental SES and

education and contribute to improvements in language and vocabulary development (Silinskas & Kikas, 2019).

The FAST-AP family engagement program provides multiple benefits to families and schools. First, its emphasis on sharing individual student data addresses the dilemma of how to provide parents with current achievement data between conferences. Also, regular invitations to school-based BreakFAST Meetings are issued from all levels of the school community and communicate a strong and persistent desire to partner with and include all families in student learning. Perceptions of invitations lead to improved family-school partnerships, which have been identified in parent engagement research as a critical element in increasing parent engagement (Dettmers et al., 2019). Additionally, foundational skills and related family FAST-AP literacy activities are preselected to match grade-level foundational skills and require minimal effort to organize. Finally, FAST-AP home-based literacy activities meet District requirements for literacy and numeracy homework. Because families need only complete a brief weekly log of their activity usage, the amount of paperwork that results from traditional homework assignments is reduced dramatically.

Summary and Conclusions

Family engagement is a multi-faceted and complex construct found to be a strong predictor of academic achievement and other academic success measures, especially from families with low levels of maternal education (McDowall & Schaughency, 2017). The research has suggested that the broad forms engagement takes and the individual engagement practices associated with engagement are diverse and confer various benefits

(Alexander et al., 2017; Boonk et al., 2018). Family engagement behaviors may take the form of formalized programs initiated by school or community groups, or they may be more subtle and include informal communications, support, or training from home. Despite of the benefits for students, barriers may be present, preventing families from becoming fully involved in their children's schooling. Nevertheless, research has suggested that the impact of barriers to engagement are mitigated when families have a role construction for engagement, a sense of efficacy for supporting their children's learning, and perceive behavioral control over their level of involvement (Yamamoto et al., 2016).

Research literature reviewed for this study described the theories of sociocultural learning and emergent literacy, which provided a lens through which the relationship between family engagement and the word identification score change of first-grade students could be examined and understood. These theories also provided a framework for examining the effect of parent participation in FAST-AP on the continuous text reading scores of first-grade students whose families participated in the family engagement pilot program. The literature review described the historical importance of parental engagement in schooling and its continued significance in modern schooling. Research findings suggested parental engagement may lead to lower rates of absenteeism retention (Barger et al., 2019), improved self-esteem, school behavior and attitudes toward school, academic self-efficacy, motivation for learning, mastery orientation, and perceived control over school outcomes (Dotterer & Wehrspann, 2016; Grijalva-Quiñonez et al., 2020; Walker, 2016); and higher rates of participation in advanced

academic courses and college enrollment (Degol et al., 2017) which, in turn, have been found to contribute to improvements in academic achievement. Finally, the literature review discussed the theories that informed the development of the FAST-AP family engagement pilot program and how the program components address barriers to family engagement.

Although family engagement has been shown to provide benefits to students, the research is unclear about which family engagement formats or combinations of activities are most effective in improving particular aspects of student literacy achievement (Park & Holloway, 2017). FAST-AP is a family engagement program that combines school-, home-, and community-based family engagement with programmatic components designed to specifically address parental role construction and self-efficacy for supporting students at home and perceived behavioral control. This study may help further an understanding regarding the impact of participation in FAST-AP on the foundational reading skills of first-grade students in a suburban Title I school in the Northeastern United States.

In Chapter 3, the methodology associated with exploring the relationship between family engagement in the FAST-AP family engagement pilot program and changes to WIF scores and continuous text reading scores will be presented. The research design, research questions, and processes for participant selection will be discussed. Additionally, the plan for analyzing data along with threats to validity and ethical procedures will be discussed.

Chapter 3: Research Method

Students experience many benefits when their parents are engaged in their education, including higher academic achievement (Boonk et al., 2018; Hamlin & Flessa, 2018), better attendance (Barger et al., 2019), improved behavior (Dotterer & Wehrspann, 2016), and lower drop-out rates (Degol et al., 2017; Walker, 2016). The purpose of this quantitative study was to examine changes to WIF scores after participation in the FAST-AP family engagement pilot program and to examine the effect of parent participation in the FAST-AP pilot program on changes in the continuous text reading scores of first-grade students from a suburban Title I school in the Northeastern United States. Score changes between pre- and posttreatment assessments on timed Vanderbilt WIF probes and untimed Dolch sight word inventories provided the data for this study's descriptive analyses. For the study's inferential analysis, the independent variable was parent engagement in the FAST-AP family engagement pilot program, and the dependent variable was changes in continuous text reading scores as measured by F & P BAS assessments.

In this chapter, I will discuss the research design and rationale, and the methodology used in this study. The discussion will include procedures for accessing the archival data and the plan for data analysis. Finally, I will address threats to validity and the detail the ethical procedures followed in the study.

Research Design and Rationale

For the present study, I used a quantitative ex post facto research design. The data points used for RQ1 and RQ2 were the pre- and posttreatment assessment score changes

of WIF, as measured by timed Vanderbilt WIF probes and untimed Dolch sight word inventory assessments. Descriptive analyses indicated if WIF changes were greater than, less than, or equal to the expected mean word identification growth. The independent variable for RQ3 was family involvement in the FAST-AP family engagement pilot program. Family engagement was a categorical variable measured at the nominal level. The dependent variable for RQ3 was score change, as measured by the F & P BAS pre- and post-assessments. A comparative analysis of score change indicated if there was a statistically significant difference in the F & P BAS score change of students whose families engaged in the FAST-AP family engagement pilot program and those who did not participate.

Researchers use descriptive research designs to describe data and organize it in practical ways (Allen, 2017). Measures of central tendency reduce data sets to a single score useful in gaining an overall sense of the data (Allen, 2017). Measures of variance indicate the type of distribution and the degree to which it is representative of the population (Allen, 2017). Descriptive research, therefore, was appropriate for this study because the observations provided a broad understanding of the direction and meaning of significant results.

A quantitative quasi-experimental research design is appropriate when the goal of a researcher is to examine the relationship between particular variables when data are derived from nonequivalent groups (Frey, 2108). A quasi-experimental design is especially appropriate for conducting educational research when random assignment to experimental and control groups is not possible for ethical or practical reasons or when

groups form naturally as in school settings (Burkholder et al., 2016; Cohen et al., 2018). Thus, nonequivalent group design (NEGD) has been widely used in education research to assess the effectiveness of educational interventions or programs (Frey, 2018). The approach for the present study was quasi-experimental NEGD because the random assignment of participants to treatment or control groups was not feasible. Instead, participants' enrollment in the schools selected for this study determined their assignment to either the treatment or comparison groups. A pretest/posttest nonequivalent group design improved the confidence in making causal inferences because both groups were similar (Cohen et al., 2018). This quasi-experimental design also provided for greater generalization of study results to classrooms within the study district.

Methodology

In the following section, I will discuss the study population, procedures for sampling and data collection, and the instrumentation and operationalization of study constructs. Next, I will describe the instruments used to collect data along with the operationalization of study variables. Finally, I will describe the plan for data analysis. The study used deidentified archival data. Therefore, recruitment of participants and individual consent were not necessary.

Population

The study school district publishes aggregated information on its data dashboard regarding the gender, ethnicity, SES, and achievement of enrolled students. The demographic information for the 2018–2019 school term was comprised of data

regarding students enrolled in the suburban Title I school district in the Northeastern United States during October 2018 (see Table 1).

Table 1

2018–2019 Study School, Comparison School, and Study School District Demographic Data

	Study School *n* =	Study School %	Comparison School *n* =	Comparison School %	District *N* =	District %
All Students	227	100.0	251	100.0	5894	100.0
Gender						
Male	121	53.3	138	55.0	3062	52.0
Female	106	46.7	113	45.0	2832	48.0
Ethnicity						
Black	51	22.5	74	29.5	1417	24.0
Hispanic	54	23.8	104	41.4	1690	28.7
White	102	44.9	58	23.1	2093	35.5
Asian	15	6.6	3	1.2	477	8.1
Other	5	2.2	12	4.8	217	3.7
Meal Status						
F/R	136	59.0	213	84.9	3601	61.1
Not F/R	91	40.1	38	15.1	2293	38.9
Special Ed						
Yes	49	21.6	36	14.3	839	14.2
No	178	78.4	215	85.7	5055	85.8
ELL						
Yes	5	2.2	19	7.6	382	6.5
No	222	97.8	232	92.4	5512	93.5

Note. Retrieved from https://www.mpspride.org

Of the 5,894 students enrolled at that time, 52% identified as males and 48% as females in grades PreK through Grade 12. Additionally, 24% identified as Black, 28.7% as Hispanic, 35.5% as White, 8.1% as Asian, and 3.7% as Other. More than 61% of all students received either free or reduced-price meals during the same school term. Only 6.5% of students were formally identified as coming from nondominant language

backgrounds requiring language support, and only 14.2% of the student population were identified to receive special education services.

The target sample for this study was first-grade students in the study district (N = 568). The district had eight K-5 elementary schools. Schools varied in size, with first-grade cohorts ranging from three classrooms in a school (n = 34) to nine classrooms in a school (n = 188). Three of the eight elementary schools were eligible to receive the Community Eligibility Provision during the 2018–2019 school term. This federal program provided free breakfast and lunch to all enrolled students and stipulated that at least 40% of families in recipient schools meet income standards based on their participation in federal or state welfare programs.

The study school demographic data were comparable with the district in many regards. However, exceptions concerning ethnicity should be noted as the study school reported a larger percentage of White students when compared to the district average (44.9%, 35.5%, respectively). In October 2018, the study school also reported a smaller percentage of Hispanic students than the district average (23.8%, 28.7%, respectively). This disparity may partially explain why the study school also reported fewer students requiring ELL support than the district (2.2%, 6.5%, respectively). It is also important to note that the number of students identified for receiving special education services at the study school is higher than the district average (36%, 14.2%, respectively). This disparity is likely the effect of self-contained special education programs that operate on the study school campus.

Similar differences in ethnicity and identification for special education and ELL support were found between the study and comparison schools. Most notably were differences in the ethnic backgrounds of students attending the schools and their discrepant ELL needs. The differences in ethnicity between the study and comparison schools were much higher than between the comparison school and the district. Black and Brown students accounted for 76.9% of students in the comparison school and 64.5% in the district, while Black and Brown students accounted for only 55.1% of students in the study school. Similar to the discussion regarding differences between the study school and the school district, the differences between the study and comparison schools regarding students' backgrounds may contribute to the disparity in identification for ELL support. Table 1 provides detailed information regarding the gender, ethnicity, SES, and special services needs for the study school, comparison school, and the study school district.

Despite notable differences between the study school and both the comparison school and the study district, there were sufficient similarities between the schools that contributed to their selection for the present study. The study and comparison cohorts were similar in size. Due to similarities in the SES in their surrounding neighborhoods, all students in both cohorts were eligible to participate in the Community Eligibility Provision. This federal program provided them with free meals. Additionally, the district data dashboard's performance data indicated that both the study and treatment schools performed similarly below study district averages on the fall reading assessment (see

Table 2). These similarities will allow for greater generalizability of results to the comparison school and the school district.

Table 2

2018–2019 Study School District First Grade F & P BAS Meets/Exceeds Data

	Fall			Spring		
	n tested	Meets/Exceeds	%	*n* tested	Meets/Exceeds	%
School 1	57	29	50.9	56	37	66.1
School 2	73	47	64.4	72	64	88.9
School 3	54	38	70.4	57	40	70.2
School 4	188	87	46.3	192	188	97.9
School 5[a]	42	11	26.6	40	21	52.5
School 6	51	10	19.6	55	21	38.2
School 7	103	39	37.9	97	67	69.1
School 8[b]	34	10	29.4	34	16	47.1
	568	261	50.0	569	438	77.0

[a] study school
[b] comparison school
Note: Retrieved from https://www.mpspride.org

Sampling and Sampling Procedures

The sampling strategy for the present study was nonprobability purposive sampling. Nonprobability sampling was most appropriate due to several factors. First, implementing the FAST-AP pilot in one school and at only one grade level was advantageous from an economic and staffing perspective. Many of the required resources were on hand at the target school, leaving a small fraction of supplies to be ordered. Additionally, time was limited for initial and ongoing teacher training to implement and administer of the FAST-AP family engagement program across the larger school district. Finally, the complexities of coordinating the operational procedures for the ongoing administration of a FAST-AP pilot across eight elementary schools made large-scale program implementation implausible. When considerations of time, money, training staff,

and managing operational procedures are present, it is preferable to use nonprobability sampling (Battaglia, 2011; Daniel, 2012).

Purposive convenience sampling was the nonprobability sampling procedure used to identify the treatment and comparison schools. Researchers using purposive sampling can play a direct role in selecting a sample population that may be representative or typical of the population (Salkind, 2010). In addition, researchers using convenience sampling can consider time, money, and convenience when identifying a study sample (Daniel, 2012). Thus, a nonprobability purposive convenience sample was appropriate for this study.

The superintendent of the study district and principal of the treatment school approved and funded the FAST-AP pilot program for use with the first-grade treatment cohort (Principal, personal communication, September 7, 2018). The treatment cohort (n = 39) was an appropriate choice for participation in the FAST-AP pilot program because, although the mean SES put students at an increased risk for low achievement, other demographic data, including gender and race profiles, made this population relatively comparable to other first-grade cohorts in the study district. First-grade students in the comparison cohort (n = 31) were most similar to the treatment cohort. Both cohorts exhibited lower literacy achievement levels at the start of the 2018–2019 school term, as measured by the F & P BAS assessment, related to most other elementary schools in the district when comparing the percentage of students meeting or exceeding the benchmark reading scores. Although there were notable differences in the ethnicity of the two cohorts, sufficient similarities existed that made each appropriate for inclusion in the

study. These similarities allowed for greater generalizability of results to other first-grade cohorts in the study district. However, differences across the school district in first-grade fall literacy achievement, as measured by the F & P BAS assessment, and demographic and SES data between participating and nonparticipating FAST-AP schools suggested the need for caution when doing so.

Archival data used for the study consisted of pre- and posttest WIF and continuous text reading assessments. Omitted from the analyses were data sets that were missing either the pre- or post-assessment. *A* priori G*Power analyses (Version 3.1.9.6) determined appropriate sample sizes for this study using a moderate Cohen's d effect size (.50), an *a* error probability of .05, and a power of .84 to ensure the sample sizes from the treatment school were sufficient for paired samples *t*-tests used to answer RQ1 and RQ2. Results indicated sample sizes of 30 were necessary for an actual power of .85. The sample groups for the WIF assessment ($n = 33$) and the Dolch assessment ($n = 30$) were equal to or larger than recommended and met the criteria for minimum sample size. An *a* priori analysis using a moderate Cohen's d effect size (.50), an *a* error probability of .05, and a power of .65 calculated sufficient sample size for an independent samples *t*-test used to answer RQ3. Based on the analysis, a minimum sample size of 68 was necessary, confirming the appropriateness of the present study's sample size ($N = 70$).

Procedures for Data Collection

The F & P BAS assessment identifies a student's highest instructional reading level at the time of administration. The study district collected first-grade F & P BAS data in October, January, and May of the 2018–2019 school term from all first-grade

students in accordance with district policies. The resulting numerical raw scores were digitally archived in Performance Tracker, the study district database. Numerical F & P BAS scores were also converted by the study district to nominal band scores and reported in the data dashboard as either as Meets/Exceeds established benchmark expectations or Does Not Meet/Approaching established benchmark expectations.

The Vanderbilt WIF probes were administered monthly to treatment school first-grade students from October through May. Results identified students' overall sight word reading fluency and indicated the number of sight words gained over time. The first-grade teaching team maintained written records of Vanderbilt WIF probe data in a Professional Learning Community (PLC) data notebook used to gather and archive student achievement data, record intervention plans, and maintain meeting notes. It was secured in a locked cabinet.

Finally, a Dolch sight word inventory was administered in October, January, and May of the 2018–2019 school year to treatment school first-grade students to identify the specific sight words students could identify quickly and accurately from leveled Dolch word lists. The data also informed teacher efforts to differentiate FAST-AP learning activities. The Dolch sight word inventory data were recorded in the PLC data notebook and secured in a locked cabinet.

Archival Data

All first-grade students who attended the treatment school during the 2018–2019 school term and generated F & P BAS, Dolch sight word, and Vanderbilt WIF assessment data from the fall and spring were included in the treatment group of families

who participated in the FAST-AP family engagement pilot program. Students who attended the comparison school during the 2018–2019 school term and have F & P BAS assessment data from the fall and spring were included in the comparison group of families who did not participate in the FAST-AP family engagement pilot program.

A Data Use Agreement, completed by the study district superintendent, was signed on August 20, 2020, and indicated consent to provide the necessary archival data for this study (see Appendix A). An addendum to the Data Use Agreement amended the archived data for which access was being requested and specified the schools from which achievement data were requested (see Appendix B). The addendum was signed and returned on November 27, 2020, and allowed access to F & P BAS, Vanderbilt WIF, and Dolch sight word inventory assessment data collected after Institutional Review Board (IRB) approval was granted On December 3, 2020. Following formal IRB approval, the data were requested and received on December 4, 2020, as outlined above.

Instrumentation and Operationalization of Constructs

The current study focused on two research questions that sought to describe changes in pre- and posttreatment scores on WIF assessments after parent engagement in the FAST-AP parent engagement pilot program. A third research question sought to examine the effect of participation in the FAST-AP pilot program on changes in the pre- and posttreatment continuous text reading scores of first-grade students in a suburban Title I school in the Northeastern United States. Score changes between pre- and post-assessments of timed Vanderbilt WIF probes and untimed Dolch sight word inventories provided data for the descriptive analyses in this study. For the inferential analysis in this

study, the independent variable was parent engagement in the FAST-AP family engagement pilot program, and the dependent variable was change in continuous text reading scores as measured by F & P BAS assessments. The construct *family involvement* was a categorical variable and was determined by student assignment to the treatment or comparison schools.

The F & P BAS is a formative and summative reading assessment for students from kindergarten through grade 8 to measure continuous text reading as measured by accurate decoding, fluency, and comprehension skills to determine a student's highest developmental reading level (Fountas & Pinnell, 2010). Books in the F & P BAS kit are vertically aligned to reading levels and become progressively more challenging. Field tests of the BAS included 498 students representing diverse socio-economic and ethnically diverse schools drawn from five geographic regions in the United States. Test-retest reliability coefficients should be at least .85 to be considered stable. The F & P BAS test-retest coefficient was .97 and demonstrated the program's stability and dependability to measure student reading scores consistently (Fountas & Pinnell, 2010). In addition, the F & P BAS had strong convergent validity with Reading Recovery in the areas of decoding, fluency, vocabulary, and comprehension for both fiction with a correlation coefficient of .94 and non-fiction with a correlation coefficient of .93 (Fountas & Pinnell, 2010). The convergent validity of the F & P BAS with Reading Recovery is particularly relevant. Reading Recovery has received recognition from the U.S. Department of Education as a scientifically research-based program that supports the

reading achievement of struggling students (U. S. Department of Education Office of Research, 1992, December).

Educators use the F & P BAS to identify students' developmental reading levels. The expected growth in developmental reading for kindergarten students is four levels, with demonstrated growth from prereading F & P Level 0 through F & P Level 4 (Fountas & Pinnell, 2010). First-grade students are expected to gain six reading levels, with demonstrated reading growth from an F & P Level 4 to an F & P Level 10 in order to show a year's growth (Fountas & Pinnell, 2010). Students who begin the year reading below grade-level standards will need to show more than a year's growth to meet grade-level benchmark standards. The difference between the F & P BAS pre- and post-assessments indicate student growth in book reading levels.

The Vanderbilt WIF probe is a standardized, curriculum-based measurement (CBM) of word reading competence (Fuchs et al., 2004). Students read isolated words from high-frequency word lists presented in random order. The score is the number of words read correctly in one minute and represents automatic word recognition skill, which, according to Fuchs et al. (2004), is "a hallmark of competent reading behavior." In studies of children at risk for poor performance ($N = 151$) from eight schools in a large, Southeastern, metropolitan school district, the concurrent validity of fall and spring Vanderbilt WIF probe (Cohen, 2010) CBM levels were found to be strongly correlated with fall and spring scores on the Woodcock Reading Mastery Test-Revised Word Identification subtests ($p <. 001$) (Fuchs et al., 2004). In the same study, the spring fluency and comprehension subtests of the Comprehensive Reading Assessment Battery

($p < .01$), which include word identification, fluency, and comprehension, are strong concurrent correlates of critical early reading behaviors (Fuchs et al., 2004). Fuchs et al. (2004) found the Vanderbilt WIF probe CBM also had strong predictive validity. The fall and spring CBM slopes were strongly correlated to the Woodcock word identification subtests ($p < .001$), and the summative Vanderbilt University WIF probe (Cohen, 2010) CBM slope was strongly correlated to all three subtests for word identification, fluency, and comprehension. These results indicate that first-grade fall scores using the WIF probe (Cohen, 2010) CBMs are reliable indicators of first-grade spring reading fluency and comprehension scores (Fuchs et al., 2004).

The Vanderbilt WIF probe was administered monthly, with the resultant scores indicating the correct words read per minute (CWPM) from a list or randomly presented high-frequency words. The Vanderbilt WIF probe provided a measure of word reading automaticity and fluency. Reading less than 10 CWPM in the initial screen was a risk indicator for reading difficulties (Cohen, 2010). The typical growth rate for students in first grade is one word per week, and the projected year-end benchmark is 30 CWPM (Cohen, 2010). The WIF probe measured growth in student WIF and was an indicator of student literacy growth.

The Dolch sight word inventory is a list of high utility words that, when mastered, provide students with a strong foundation for reading success. Divided into levels by frequency of occurrence in children's literature from preprimer, primer, first grade, and second grade, the sight word lists support fluent reading of texts at a corresponding level of difficulty (Dolch, 1936). The inventory score indicated the number of high-frequency

words students could identify from leveled word lists (Dolch, 1936). Analysis of the sight word inventory also allowed for differentiation of home-based learning materials and activities.

The Dolch sight word inventory was administered in October, January, and May. The assessment was untimed and identified the number of high-frequency words students could identify with automaticity or by applying more complex word analysis skills. Lists presented words from a continuum ranging from simple consonant-vowel-consonant sight words to high frequency-words that contain more complex spelling patterns. The Dolch sight word inventory scores were a measure of student literacy growth.

Expected weekly growth in WIF was determined using benchmarks in published research literature for oral reading fluency (ORF) and WIF. ORF is related to WIF and refers to the correct number of words read from a grade-level passage in one minute (Hasbrouck & Tindal, 2017). Research regarding the benchmarks for expected growth in ORF ranged from improvements of 1.9 correct words per minute (Hasbrouck & Tindal, 2017) to 2 correct words per minute (Fuchs & Fuchs, 1993; Tindal & Nese, 2013). WIF is based on reading individual words and may be timed or untimed (Zumeta et al., 2012). Published benchmarks for expected weekly growth using timed WIF assessments ranged from .83 to .87 correct words per minute (Zumeta et al., 2012). Published benchmarks for expected weekly growth using untimed WIF assessments ranged from 1.4 words (Fuchs & Fuchs, 2011) to 1.5 words (Hosp et al., 2007). The mean projected growth from published benchmarks for ORF and timed and untimed WIF was 1.5 words per week. The mean weekly projected growth score was multiplied by the total number of study

weeks to calculate the mean expected growth for study students (31.5) and was compared to actual changes in timed and untimed WIF scores for this study.

The independent variable in RQ3, family participation in the FAST-AP family engagement pilot program, was categorical. It was measured at a nominal level. Families whose students were enrolled in the comparison school were said to have had no involvement in FAST-AP family engagement activities, while families whose students were enrolled in the treatment school were said to have been involved in FAST-AP family engagement activities. The dependent variable was the change in the F & P BAS score and was a discrete variable measured at the interval-ratio level. Score change was calculated as the difference between the pre- and posttreatment assessments.

Data Analysis Plan

IBM Statistical Package for Social Sciences (SPSS) is a statistical software package widely used in education and social science research for collecting, transforming, and analyzing data, screening data, identifying anomalous participants and outliers, and making determinations of skewness and kurtosis (Frey, 2018). Before conducting data analysis, the data sets were screened to detect corrupt or incomplete data and screened to identify outliers. Following a manual inspection for completeness, SPSS version 25 software screened the data further, preparing it for analysis by identifying incomplete or incorrectly entered data. Incomplete data pairs, missing either a matched fall or spring assessment score, were cross-referenced with raw data to verify that they were incomplete. Incomplete data pairs were removed from the data set. Data falling outside established values were cross-referenced with raw data and reentered accurately.

Following a thorough screening and cleaning process, SPSS version 25 software identified outlier data using box plots and histograms (Hoaglin & Inglewicz, 1987). No outliers were found.

The research questions and hypotheses for this study were:

RQ1: What is the change to the timed WIF scores, as measured by timed Vanderbilt WIF probes, of first-grade pilot students in a suburban Title I school in the Northeastern United States after participation in the FAST-AP family engagement pilot program?

$H_0 1$: There is no the change to the timed WIF scores, as measured by Vanderbilt WIF probes, of first-grade pilot students in a suburban Title I school in the Northeastern United States after participation in the FAST-AP family engagement pilot program.

$H_1 1$: There is a change to the timed WIF scores, as measured by Vanderbilt WIF probes, of first-grade pilot students in a suburban Title I school in the Northeastern United States after participation in the FAST-AP family engagement pilot program.

RQ2: What is the change to the untimed WIF scores, as measured by Dolch sight word inventory assessments, of first-grade pilot students in a suburban Title I school in the Northeastern United States after participation in the FAST-AP family engagement pilot program?

$H_0 2$: There is no change to the untimed WIF scores, as measured by Dolch sight word inventory assessments, of first-grade pilot students in a suburban Title I school in the Northeastern United States after participation in the FAST-AP family engagement pilot program.

H_12: There is a change to the untimed WIF scores, as measured by Dolch sight word inventory assessments, of first-grade pilot students in a suburban Title I school in the Northeastern United States after participation in the FAST-AP family engagement pilot program.

RQ3: What is the effect of parent participation in the FAST-AP family engagement pilot program on changes to the continuous text reading scores of first-grade students in a suburban Title I school in the Northeastern United States compared to continuous text reading scores of first-grade students in a suburban Title I school in the Northeastern United States whose families did not participate, as measured by the F & P BAS assessment?

H_03: There is no statistically significant effect of parent participation in the FAST-AP family engagement pilot program on changes to the continuous text reading scores of first-grade students in a suburban Title I school in the Northeastern United States compared to continuous text reading growth scores of first-grade students in a suburban Title I school in the Northeastern United States whose families did not participate, as measured by the F & P BAS assessment.

H_13: There is a statistically significant effect of parent participation in the FAST-AP family engagement pilot program on changes to the continuous text reading scores of first-grade students in a suburban Title I school in the Northeastern United States compared to continuous text reading growth scores of first-grade students in a suburban Title I school in the Northeastern United States whose families did not participate, as measured by the F & P BAS assessment.

SPSS version 25 produced descriptive and inferential statistics used to answer the research questions. Descriptive statistics included the mean, maximum and minimum scores, and standard deviation. The descriptive analyses provided a means for understanding and describing the change in WIF scores after participation in the FAST-AP pilot program and statistics used to answer RQ1 and RQ2. Inferential statistics from *t*-tests were used to determine whether a statistically significant difference was found between pre- and posttest literacy assessment scores.

The WIF scores were analyzed to determine if the pretest scores were statistically significantly different than post-test scores after participation in the FAST-AP pilot program. To calculate score changes for WIF assessments after treatment, the present study used the difference between students' pre- and posttreatment scores. The score changes were analyzed to determine the direction of changes, either positive or negative. Finally, the mean score changes were compared to current research and published benchmarks for expected word reading fluency changes to determine if the mean observed score changes were greater than, less than, or equal to expected benchmark changes.

The paired samples *t*-test uses a pretest/posttest design to test a treatment's effectiveness using a single group (Knapp, 2018). SPSS version 25 tested the assumptions for *t*-tests. The Shapiro-Wilk test for the assumption of normality indicated that the Vanderbilt WIF change scores were not normally distributed. Therefore, the assumptions for parametric tests were not met (Frey, 2018). The Wilcoxon signed-rank test is an appropriate nonparametric alternative to the paired samples *t*-test when groups

are heterogeneous (Knapp, 2018). A Wilcoxon signed-rank test provided statistics used to determine if changes between the pre- and posttest Vanderbilt WIF scores were statistically significant after participation in the FAST-AP family engagement pilot program. The Shapiro-Wilk test for the assumption of normality indicated that Dolch sight word inventory growth scores were normally distributed, and a paired samples *t*-test provided statistics used to determine if growth score change was statistically significant after participation in the FAST-AP pilot program.

The independent samples *t*-test is an inferential statistical test to determine if there is a statistically significant difference between the means of two unrelated groups (Allen, 2017). The independent samples *t*-test is particularly well-suited for quasi-experimental designs using a pretest/posttest design (Abbott, 2017). The present study met the primary assumptions for an independent samples *t*-test: one continuous dependent variable and one independent, categorical variable expressed as two levels or groups, and observations were independent of one another (Frey, 2108). The Shapiro-Wilk test indicated that the data met the assumption of normality, and Levene's test indicated that the data met the assumption of the equality of variances. Therefore, the independent samples *t*-test provided statistics used to answer RQ3. The corresponding *p*-value suggested whether differences may be attributed to chance (Allen, 2017). The present study used a $p \leq .05$ and Cohen's d effect sizes (small 0.2, moderate 0.5, and large 0.8).

Threats to Validity

Threats to validity come from both internal and external sources. External validity refers to the generalizability of the results from the population under study to a larger

population (Frey, 2018). On the other hand, internal validity refers to the extent to which extraneous variables have been controlled so that variation in the dependent variable can be likely attributed to the independent variable (Drew et al., 2008; Meltzoff & Cooper, 2018). Threats to internal and external validity must be addressed for study results to be useful.

Frey (2018) suggested that external validity is of concern in studies that employ a study sample. However, the effects of this type of threat to external validity can be mitigated by addressing sampling procedures. The present study used nonprobability purposive sampling, and care was taken to ensure that participants in this pilot study were representative of the larger school district population in terms of race, gender, and achievement. Matching the sample group to the general district population helped to ensure that results could be generalized to other school populations with similar demographic characteristics within the district (Frey, 2018). Meltzoff and Cooper (2018) suggested that setting and treatment interaction may pose a threat to external validity. In this case, differences in classroom environments and teaching styles could have affected the generalizability of results to other classroom settings. To minimize this threat, treatment was administered, and data gathered and analyzed across multiple classrooms.

The maturation of study participants can impact internal validity and hinder the ability to assign a causal relationship between independent variables and observed changes in the dependent variables (Drew et al., 2008). Study design can improve confidence in ruling out noncausal explanations for observed relationships between variables (Frey, 2018). The pretest-posttest design included treatment and comparison

groups used to answer RQ3 addressed study limitations related to maturation. An independent samples *t*-test used F & P BAS continuous text reading assessment pre- and posttreatment scores to compare the treatment group's literacy scores to those of the comparison group. This study design improved the internal validity of the study and increased confidence in attributing changes to the treatment rather than the effects of maturation (Frey, 2018).

Construct validity refers to the degree to which a test measures what it claims to measure (Allen, 2017). If a performance measure is validated, manipulating the construct should result in changes in the performance measure results. To ensure construct validity, the performance measures selected for the study were standardized and were found to be valid (Fountas & Pinnell, 2010; Fuchs et al., 2004).

Statistical conclusion validity refers to the degree to which conclusions drawn regarding the null hypothesis are plausible (Creswell, 2014). It allows researchers to determine whether a relationship exists between the variables and if the outcome is the result of the intervention (Salkind, 2010). Threats to statistical conclusion validity can be mitigated by minimizing the probability of Type I and Type II errors (Salkind, 2010). The level of statistical significance for this study was held at the .05 level to ensure statistical conclusion validity.

Ethical Procedures

Ethical procedures for conducting research were followed throughout this study. IRB permission (12-03-20-0043384) was received before retrieving and analyzing archival data. Permission was obtained from the study school district to access archival

reading achievement data from F & P BAS, Dolch sight word inventory, and Vanderbilt WIF probe assessment records.

Student and teacher identities were kept anonymous. Identifying information was redacted from all records by the study district prior to releasing records. All hard copies of data will be stored in locked files for 5 years from the study date. Only the primary researcher will have access to the files. Digital data transcribed from teacher records and the study school database will be stored on a password-protected computer kept in a home office.

As an employee of Study School and a teacher in one of the study classrooms, there was the potential for researcher bias. The F & P BAS data were reviewed at PLC grade-level meetings, and school reading specialists and administrators randomly audited scoring outcomes for uniformity to address this. In addition, the Vanderbilt WIF probes and Dolch sight word inventory assessments were administered collaboratively by classroom teachers and paraprofessionals to ensure that assessment protocols were consistent.

Summary

The purpose of this quantitative study was to examine changes to WIF scores after participation in the FAST-AP family engagement pilot program and to examine the effect of parent participation in the FAST-AP pilot program on changes in the continuous text reading scores of first-grade students from a suburban Title I school in the Northeastern United States. Study participants were students from two elementary schools ($N = 70$) with comparable literacy achievement, SES, and demographic profiles.

They were also representative of the population's SES and demographic backgrounds in the large suburban school district.

A Wilcoxon sign-rank test was conducted to determine if there was a statistically significant change in WIF scores of first-grade pilot students, as measured by Vanderbilt WIF probes and Dolch sight word inventories, after parent participation in the FAST-AP family engagement pilot. The difference in the mean post-test and pretest scores provided the mean score change for WIF and was compared to published benchmarks for mean expected word fluency growth to determine if the change was greater than, less than, or equal to benchmark expectations.

An independent samples *t*-test was conducted to determine if there was a statistically significant difference in score change between the pre- and posttreatment continuous text reading scores, as measured by the F & P BAS, of first-grade students whose families participated in the FAST-AP family engagement pilot program and families who did not participate. The study design anticipated and controlled for threats to internal and external validity. Similarly, threats to construct and statistical conclusion validity were identified, and steps were taken to mitigate their potential effects on the study outcomes.

In Chapter 4, I will discuss the procedures for data collection including the time frame and any discrepancies from the data collection plan outlined in Chapter 3. Baseline descriptive and demographic characteristics of the sample will be reviewed, and its representativeness of the larger population will be discussed. Finally, the study results will be presented.

Chapter 4: Results

The purpose of this quantitative study was to examine changes to WIF scores after participation in the FAST-AP family engagement pilot program and to examine the effect of parent participation in the FAST-AP pilot program on changes in the continuous text reading scores of first-grade students from a suburban Title I school in the Northeastern United States. Score changes between pre- and post-assessments from timed Vanderbilt WIF probes and untimed Dolch sight word inventories provided the data for this study's descriptive analyses. To determine the effect of parent participation in the FAST-AP pilot program on changes to continuous text reading scores, the independent variable was parent engagement. The dependent variable was change in continuous text reading scores as measured by F & P BAS assessments.

The major sections of Chapter 4 include a description of the study sample and the procedures used for data collection and analysis. Discussion of data collection will include the time frame, discrepancies in the plan from Chapter 3, and the study population demographics. I will discuss the study results in regard to the research questions and hypotheses. Finally, a summary of the findings concludes the chapter.

Data Collection

The study district superintendent submitted a signed data use agreement on August 20, 2020, indicating consent to provide the necessary archival data for this study (see Appendix A). An addendum to the Data Use Agreement specified the schools providing data and amended the archived achievement data requested (see Appendix B). The addendum was signed and returned on November 27, 2020. On December 3, 2020,

the IRB confirmed that Families and Schools Together in Academic Partnerships and Student Literacy Achievement met Walden University's ethical standards. On December 4, 2020, following IRB approval, I requested and received the deidentified F & P BAS achievement data from the study district. At that time, I also accessed the archived Dolch sight word inventory and Vanderbilt WIF probe data as outlined in the Data Use Agreement. There were no discrepancies in the data collection plan outlined in Chapter 3.

The population for this study was a suburban Title I school district in the Northeastern United States. The objective of nonprobability purposive sampling is to identify a sample that can be assumed to be approximately representative of the study population (Frey, 2018). Nonprobability purposive sampling provided the frame for identifying two schools in the study district with comparable demographic statistics and baseline literacy scores. The first-grade cohorts from each site provided the sample data for this study.

Results

Descriptive statistics calculated for score changes of 2018–2019 WIF assessments showed a mean change of 34.18 words per minute on timed assessments, and 67.58 words on untimed assessments. Analyses showed mean preassessment scores on both measures were lower than the mean post-assessment scores, which indicated the direction of score change was positive. Complete results are provided in Table 3.

Table 3

2018–2019 Descriptive Statistics for Word Identification Fluency Assessment Score Changes

Assessment Type	*N*	Minimum Score	Maximum Score	*M*	*SD*
Vanderbilt WIF	34	5.0	81.0	34.18	16.64
Dolch SW Inventory	33	24.0	119.0	67.58	23.27

Note: SW = sight word

Descriptive statistics calculated for score changes on continuous text reading assessments showed a mean change for the treatment group of 5.39 reading levels and a mean change for the comparison group of 5.07 reading levels. Analysis showed the mean preassessment scores were lower than the mean post-assessment scores for both groups. The positive direction of score changes indicated growth. A summary of descriptive statistics is provided in Table 4.

Table 4

2018–2019 Descriptive Statistics for F & P BAS Score Changes

F & P BAS Source	*N*	Minimum Score	Maximum Score	*M*	*SD*
Population	70	0.0	10.0	5.24	2.22
Treatment group	39	1.0	9.0	5.39	2.05
Comparison group	31	0.0	10.0	5.07	2.45

Research Question 1

RQ1 focused on determining the change to the timed WIF scores measured by timed Vanderbilt WIF probes after participation in the FAST-AP family engagement pilot program. A Shapiro-Wilk test indicated that the Vanderbilt WIF scores were not normally distributed ($p = .002$). The data did not meet the assumptions for *t*-tests; therefore, a Wilcoxon signed-ranks test provided statistics used to answer RQ1. The

output, shown in Table 5, indicated that posttest scores on the Vanderbilt WIF were statistically significantly different from the pretest scores, $Z = 5.09$, $p < .001$. The effect size for this analysis ($r = .66$) exceeded Cohen's (1992) convention for a moderate effect ($r = 0.5$). Preassessment scores ($M = 22.21$, $SD = 14.47$) were lower than post-assessment scores ($M = 56.38$, $SD = 23.68$), suggesting growth in timed WIF scores. Mean growth in timed WIF ($M = 34.18$) was greater than the published benchmarks for WIF growth ($M = 31.5$) and a one sample *t*-test provided statistics used to determine whether the difference was statistically significant. Results indicated that growth did not reach statistical significance, $t(33) = .94$, $p = .36$, 95% CI [-3.13, 8.48], and the small effect size ($d = .16$) suggested that the observed difference in mean growth scores of timed WIF assessments and published benchmarks for mean WIF growth was negligible. Therefore, the null hypothesis, which stated that there would be no change to timed WIF scores after participation in the FAST-AP family engagement pilot program, was supported by the data and resulted in a failure to reject the null hypothesis.

Table 5

Statistical Output for 2018–2019 Literacy Assessment Score Change

Assessment Type	Pretest		Posttest		Standard score	*p*	Effect size
	M	*SD*	*M*	*SD*			
Vanderbilt WIF [a]	22.21	16.47	56.38	23.68	$Z = 5.09$	<.001	$r = .66$
Dolch SWI [b]	48.27	26.29	115.55	20.18	$t(32) = 16.37$	<.001	$d = 2.85$

Note. SWI = sight word inventory.
[a] $N = 34$. [b] $N = 33$

Research Question 2

RQ2 focused on determining the change to the untimed WIF scores measured by Dolch sight word inventory assessments after participation in the FAST-AP family engagement pilot program. A Shapiro-Wilk test indicated that the data were normally distributed ($p = .20$), thus the assumptions for *t*-tests were met. Statistics from a paired samples *t*-test, shown in Table 5, indicated a finding of statistical significance between the pre- and posttest WIF scores pre- and posttest scores, $t(33) = 16.37$, $p < .001$. The effect size ($d = 2.85$) exceeded Cohen's (1992) convention for a large effect ($d = .80$). The Dolch sight word preassessment scores ($M = 48.27$, $SD = 26.29$) were lower than post-assessment scores ($M = 115.55$, $SD = 20.18$), and suggested that score change was a growth in untimed WIF. The total mean growth in untimed WIF ($M = 67.58$) was greater than the published benchmarks for WIF growth ($M = 31.5$), and a one sample *t*-test provided the statistics used to determine if the difference was statistically significant. Results indicated that score growth of untimed WIF assessments was statistically significant, $t(32) = 8.91$, $p = < .001$, 95% CI [27.83, 44.33]. The effect size ($d = 1.55$) exceeded Cohen's (1992) convention for a large effect ($d = .80$) and supported the finding of significance. The null hypothesis, which stated that there would be no change to untimed WIF scores after participation in the FAST-AP pilot program, was rejected.

Research Question 3

RQ3 examined the effect of parent participation in the FAST-AP family engagement pilot program on changes to the continuous text reading scores of first-grade students compared to the continuous text reading score changes of first-grade students

whose families did not participate, as measured by the F & P BAS assessment. A Shapiro-Wilk test indicated that the data were normally distributed (p = .29), and Levene's test of homogeneity of variances indicated that variances between the study groups were similar (p = .55). Therefore, the assumptions of t-tests were met. The mean scores for reading levels gained of students whose families participated in the FAST-AP program (M = 5.39, SD = 2.05, n = 39) were higher than the mean scores for reading levels gained of students whose families did not participate in the FAST-AP program (M = 5.07, SD = 2.45, n = 31). However, the results of the independent samples t-test, shown in Table 6, showed that this difference was not statistically significant, t(70) = .60, df = 68, p = .55, *n.s*. 95% CI [-7.52, 1.39]. The effect size (d = .14) supports the non-significant finding. The null hypothesis, which suggested that there would be no effect of parent participation in the FAST-AP family engagement pilot program on changes to continuous text reading scores, was supported by the data and resulted in a failure to reject the null hypothesis.

Table 6

Statistical Output for 2018–2019 F & P BAS Reading Levels Gained

Treatment group [a]		Comparison group [b]		t(70)	p	Effect size
M	*SD*	*M*	*SD*			
5.39	2.05	5.07	2.45	.60	.55	*n.s.*

[a] n = 39. [b] n = 31.

Summary

The purpose of this quantitative study was to examine changes to WIF scores after participation in the FAST-AP family engagement pilot program and to examine the

effect of parent participation in the FAST-AP pilot program on changes in the continuous text reading scores of first-grade students from a suburban Title I school in the Northeastern United States. This study contained three research questions. RQ1 and RQ2 addressed changes in timed and untimed WIF scores after participation in the FAST-AP pilot program. Analyses indicated significant differences between the WIF pretest scores and posttest scores, and the direction of changes was found to be positive. These results indicated that untimed and timed WIF scores showed growth after participation in the FAST-AP family engagement pilot program. A one sample t-test indicated that the mean difference between score growth on timed WIF assessments and published score growth benchmarks was not statistically significantly different, resulting in a failure to reject the null hypothesis. A one sample t-test indicated a statistically significant difference between untimed WIF growth scores and published benchmarks for growth and the null hypothesis for RQ2 was rejected. RQ3 examined the effect of participation in the FAST-AP pilot program on continuous text reading scores. Participation did not have any significant effect leading to a failure to reject the null hypothesis.

I will summarize the key findings of this study in Chapter 5. The discussion will include an interpretation of the study's findings and limitations that may impede generalizability, trustworthiness, validity, and reliability. Finally, I will conclude with a discussion of recommendations for further research.

Chapter 5: Discussion, Conclusions, and Recommendations

Research literature has suggested a positive relationship between parental involvement in school and improved student literacy achievement. Brown et al. (2019) found that home-based literacy activities are especially vital in promoting the literacy achievement of students who read below grade-level expectations. The purpose of this quantitative study was to examine changes to WIF scores after participation in the FAST-AP family engagement pilot program and to examine the effect of parent participation in the FAST-AP pilot program on changes in the continuous text reading scores of first-grade students from a suburban Title I school in the Northeastern United States. This study provided insight into how particular measures of reading achievement changed after participation in the FAST-AP pilot program.

Score changes on archival pre- and post-assessment data from the 2018–2019 school term provided the statistics used for the analyses in this study. Hypothesis testing utilized *t*-tests or the nonparametric equivalent Wilcoxon signed-rank test. The key findings indicated that WIF posttest scores were statistically significantly different from pretest scores after participation in the FAST-AP family engagement pilot program, which suggested growth in WIF skills. Mean growth in timed WIF scores ($M = 34.18$, $SD = 16.64$) was not found to be significantly different from published projected growth for WIF ($M = 31.5$), while mean growth in untimed WIF scores ($M = 67.58$, $SD = 23.27$) was found to be statistically significantly different from published projected growth for WIF ($M = 31.5$). A statistically significant difference was not found between the continuous text reading scores of first-grade students whose families participated in the FAST-AP

parent engagement pilot program and students whose families did not participate. Study results have suggested that family engagement in the FAST-AP pilot program has a positive effect on sight word recognition as a foundational reading skill but did not significantly impact overall reading achievement.

This chapter includes a summary of the study. I include an interpretation of study findings and describe the study's limitations. Finally, I discuss recommendations for further research and the implications for positive social change.

Interpretation of the Findings

Research Question 1 and Research Question 2

The FAST-AP family engagement pilot program synthesized both home- and school-based activities to promote student literacy learning at home. Parents received learning materials and activities designed to build students' sight word fluency. School-based training introduced families to specific literacy activities and allowed time to observe effective strategies for promoting sight word acquisition and positive procedures for correcting student miscues. Fagan et al. (2016) found that workshops focusing on assisting parents in developing such skills impacted student achievement positively. The positive benefits of family engagement are of particular importance in improving declining achievement scores and reducing growing achievement gaps in schools with large nondominant cultural, language, and economic groups (Calzada et al., 2015; Epstein, 2018; Hamlin & Flessa, 2018; Ishimaru et al., 2016; Pemberton & Miller, 2015; Petridou & Karagiorgi, 2018).

Results of this study indicated growth in WIF scores, as measured by timed Vanderbilt WIF probes and untimed Dolch sight word inventory assessments, after family participation in the FAST-AP pilot program. These findings were consistent with research studies discussed in Chapter 2, which suggested that parental involvement in home-based learning activities such as helping with homework and playing games leads to improvements in academic achievement (Boonk et al., 2018). Similar benefits to literacy outcomes were also found when parents participated in school-based training that equipped them with specific instructional strategies to support literacy learning from home (Fagan et al., 2016; Park & Holloway, 2017). However, there were differences in score growth between timed and untimed WIF assessments.

The mean score changes between pre- and posttest assessments for the timed Vanderbilt WIF (M = 34.18) and the untimed Dolch sight word inventory (M = 67.58) were greater than published projections for mean score growth (M = 31.5). The differences in the amount of change found between the measures of WIF may be attributed to the types of words used in each assessment and the kind of practice included in the FAST-AP pilot program. The Vanderbilt WIF assesses a broad sampled word list containing 500 high-frequency words presented randomly (Zumeta et al., 2012). The Dolch sight word inventory uses a narrow sampled list containing the 220 most frequently found high-utility words in children's literature (Dolch, 1936). Unlike Vanderbilt WIF word lists, Dolch word lists are leveled according to difficulty (Dolch, 1936). Hannon et al. (2020) found that family engagement programs that focused on a single literacy strand acted to limit growth to that single strand. Given that the words

selected for inclusion in FAST-AP activities were limited to Dolch sight words, leveled from preprimer through Grade 1, and literacy activities involved only untimed practice of high-frequency words, it was expected that growth on untimed Dolch assessments would be greater than that found on timed Vanderbilt WIF assessments.

Compared to published benchmarks for WIF growth, there was no statistically significant difference for timed assessments, but a statistically significant difference was found for untimed assessments. Differences in the findings of significance between timed and untimed WIF compared to published expected growth may be attributed to the method for calculating the test value for expected growth. Calculations for the mean weekly expected growth used benchmarks for timed and untimed WIF and ORF found in published research literature. Benchmarks for ORF (M = 1.97) included the largest expected weekly growth, followed by untimed (M = 1.45) and timed (M = .82) WIF. ORF is related to WIF but was not directly assessed (Hasbrouk & Tindal, 2017). Although ORF benchmarks inflated the overall expected growth score, they were included in calculating the test value. Therefore, although supported by the research literature regarding reading fluency growth in general, the test value may not accurately reflect actual expected growth for timed and untimed WIF.

The study findings regarding score changes to timed and untimed WIF after participation in the FAST-AP family engagement pilot were supported in the research literature. Changes in WIF pre- and post-assessment scores were growth in WIF. Findings confirmed the current understanding in the peer-reviewed literature in Chapter 2.

Research Question 3

This study's findings indicated a nonsignificant relationship between the continuous text reading F & P BAS scores of students whose families participated in the FAST-AP family engagement program and students whose families did not participate in the FAST-AP family engagement program. The nonsignificant result disconfirmed research regarding automatic word processing theory which has suggested a strong relationship between sight word fluency and whole or continuous text comprehension (Grünke, 2019). However, Hannon et al. (2020) found that programs focused on the practice of isolated emergent skills limited improvements to the targeted skills and supported the finding of nonsignificance for continuous text reading. Park and Holloway (2017) found the benefits of family involvement may not generalize across all measures of achievement or all student groups. Although there was a consensus in peer-reviewed research in Chapter 2 suggesting that family engagement was found to be a strong predictor of academic achievement and other measures of academic success, McDowall and Schaughency (2017) found the benefits varied according to the age of students and the form of family engagement. Family engagement takes many forms that fall along a continuum of practices associated with a range of benefits for student achievement (Alexander et al., 2017; Boonk et al., 2018; Hornby & Blackwell, 2018). Although there was no finding of statistical significance between the literacy achievement of students whose families participated in FAST-AP and families who did not participate in FAST-AP, as measured by the F & P BAS assessment, the finding is consistent with the body of

research literature citing generalized benefits for students when their families are engaged in their schooling.

Limitations of the Study

This study's limitations affected external validity and the subsequent ability to generalize study results beyond the treatment school (Frey, 2018). Population validity refers to the degree to which the study population is representative of the larger population and whether study findings can be reasonably generalized (Frey, 2018). Population validity was a concern in two ways. First, study participants voluntarily engaged in school- and home-based activities. They may have been predisposed to being actively engaged in their children's schooling or have possessed personal characteristics that made them more or less amenable to invitations to become engaged in school- and home-based activities than members of the comparison group. Therefore, participating families may not have been representative of the larger population. Second, sample bias resulting from nonprobability convenience sampling can pose a risk when attributing statistically significant variations in the dependent variable to the treatment rather than differences between groups that result from group assignment (Frey, 2018) and was a consideration in the present study. However, purposive sampling procedures used for this study produced groups that were logically assumed to be approximately representative of the population and mitigated the adverse effects to external validity of convenience sampling. Nonetheless, the results may only be representative of the study population and not be generalizable to the larger population.

A limitation affecting this study's internal validity was the lack of a comparison group to determine the effect of participation in the FAST-AP family engagement program on literacy growth scores as measured by Vanderbilt WIF probes and Dolch sight word inventories. A comparison group allows researchers to conclude that observed differences between groups are due to the treatment and not other variables (Frey, 2018). A comparison group for the WIF measures was not available. Due to this inherent design weakness, it is not possible to definitively conclude that participation in the FAST-AP program was responsible for observed growth in WIF or to rule out a causal relationship between observed literacy growth and subject maturation.

Recommendations

The purpose of this quantitative study was to examine changes to WIF scores after participation in the FAST-AP family engagement pilot program and to examine the effect of parent participation in the FAST-AP pilot program on changes in the continuous text reading scores of first-grade students from a suburban Title I school in the Northeastern United States. The findings indicated a positive growth of the foundational reading skill of WIF after participation in the FAST-AP family engagement pilot program. However, the benefits of participation did not generalize to statistically significant improvements in reading continuous text as measured by the F & P BAS assessment. The following recommendations address the study design's weaknesses and suggest improvements to the FAST-AP program that warrant further study.

Internal validity allows researchers to be confident in the relationship between the independent and dependent variables (Frey, 2018). The lack of a comparison group is a

fundamental weakness of the present study's design and contributes to reducing the internal validity of findings. Future study of the effects of family participation in the FAST-AP engagement program on the WIF should include a comparison group, thereby improving internal validity and confidence in assigning findings of statistical significance to participation in the program rather than to other variables such as subject maturation. Further study of the effects of participation in the FAST-AP family engagement program on the literacy achievement of first-grade students should also include larger sample groups. A larger sample size would improve the likelihood that study and comparison groups were similar in demographic makeup and participation patterns in home-based schoolwork and learning activities. Thus, improvements in the external validity of study findings would allow for greater generalization of the study results (Frey, 2018).

The FAST-AP family engagement program components were designed to address issues regarding parental role construction and self-efficacy for supporting student learning at home. Regular opportunities and invitations to engage in the school- and home-based activities were critical to ensuring parental awareness of opportunities to become and remain engaged in their students' learning. Future research should incorporate qualitative inquiry to measure the effect of participation in FAST-AP on, and the relative importance of, parental attitudes and norms toward engagement, perceived controls or barriers and parental intentions for becoming or remaining involved in schooling, and family perceptions of opportunities and invitations for involvement on family engagement (Bracke & Cortes, 2012). A mixed-methods study would also address the limitations of using a single method to determine the effects of the FAST-AP

intervention, leading to a better understanding of families' needs and the actual impact of FAST-AP components on family engagement and subsequent student literacy achievement (Frey, 2018). A mixed-methods approach might also lend an understanding of the non-academic benefits of participation in FAST-AP, such as school readiness and language development (Brown, 2016; Fagan et al., 2016; McCormick et al., 2020) and improved attendance and school behavior (Baker et al., 2016; Barger et al., 2019; Dotterer & Wehrspann, 2016).

In addition to the recommended improvements to the present study design and follow-up study, subsequent study should also explore the benefits of specific programmatic changes to the FAST-AP pilot program. Taylor et al. (2018) found that students' acquisition rate for sight words impacted their ability to rehearse and recall high-frequency words. Repeated reading of isolated and contextual sight words leads to increased retention, provided the number of new words students are exposed to does not exceed their acquisition rate (Taylor et al., 2018). For this reason, changes to the FAST-AP program should include explicit family training and support regarding the frequency and volume of folding in new words for practice with words already mastered. Home-based activities should also include predictable sight word texts to provide additional exposure to target sight words and practice with continuous text reading. Sight words should be selected from predictable sight word texts to increase exposure to and improve mastery of target sight words (Taylor et al., 2018) and broad sampled high-frequency word lists representing a range of reading difficulty (Zumeta et al., 2012). Finally, although differences between students' continuous text reading skills whose parents

participated in the FAST-AP program and those whose families did not participate in the FAST-AP program did not meet the level of statistical significance, other academic and non-academic benefits not measured in this study may be present. Further study should investigate whether other unexplored student benefits of participation in FAST-AP such as reading readiness skills and language development (Brown, 2016; Fagan et al., 2016; McCormick et al., 2020) or improved attendance and school behavior (Baker et al., 2016; Barger et al., 2019; Dotterer & Wehrspann, 2016) exist over and above participating in traditional homework activities. Given that measures of continuous text reading were similar whether families engaged in FAST-AP or traditional homework activities, further study should explore if other academic and non-academic student benefits of participation in FAST-AP exist that would warrant continuing the FAST-AP program in place of traditional homework assignments.

Limitations of the present study's design and recommended programmatic improvements indicate that further study is needed. Future researchers examining the FAST-AP family engagement program should investigate the effects of improvements to the study design, including the addition of a comparison group for measuring sight word growth, larger sample groups, and qualitative inquiry into the effects of participation on families. Exploring whether recommended programmatic changes lead to significant improvements in WIF and continuous text reading as measured by Vanderbilt WIF probes, relevant sight word inventories, and F & P BAS assessments should form the basis for further study.

Implications

Positive social change is "a deliberate process of creating and applying ideas, strategies, and actions to promote the worth, dignity, and development of individuals, communities, organizations, institutions, cultures, and societies. Positive social change results in the improvement of human and social conditions" (Walden University, 2020, p. 5). Family-school relationships provided a lens through which to examine social change. The study focused on building authentic, collaborative partnerships between families and schools and acknowledged the funds of knowledge inherent within each family unit to promote positive student academic outcomes.

This study has implications for effecting positive social change because of its potential to influence how educators envision and implement family engagement initiatives. The FAST-AP philosophy facilitates a shift from viewing families through a deficit lens to embracing them as invaluable partners in promoting academic achievement. School- and home-based activities empower families as experts who possess a unique understanding of their students' strengths and needs and share both a strong commitment and accountability for academic achievement. The overarching tenet of the FAST-AP program positions families as knowledgeable and motivated collaborators capable and desirous of making meaningful contributions to their students' academic outcomes. The resulting paradigm shift in how educators envisage the family involvement resource can impact how educators collaborate with families and the types of activities they provide for extended learning at home.

This study may also contribute to meaningful social change at the local school and district levels because it provides an improved understanding of effective family engagement practices. A deeper understanding of effective family engagement practices may allow decision-makers to funnel limited financial and human resources toward high leverage engagement activities. A clear understanding of effective family engagement practices may also contribute to a more equitable response to low student achievement, increase engagement in schooling for all families, and improve literacy achievement for all students.

The present study's implications for positive social change provide a starting point for understanding the importance of not merely including parents in their children's schooling but actively engaging them in academic decision-making and supportive behaviors that promote academic achievement. However, due to the study's design limitations, more study is needed to understand the effect of participation in the FAST-AP family engagement program on literacy achievement. Additional study, including the recommended programmatic changes to the FAST-AP program, may help educators and families better understand the benefits of learning activities on academic achievement and other measures of student success and should be the focus of future research. Given the importance parents place on limited family time, understanding the concrete benefits of participation in FAST-AP game-based activities versus traditional homework activities is critical.

Conclusion

Family engagement has been associated with many school success indicators (Boonk et al., 2018). The academic benefits include narrowing the achievement gap and even reversing declining student achievement, particularly in schools with large nondominant ethnic/cultural, language, and economic groups (Calzada et al., 2015; Epstein, 2018; Hamlin & Flessa, 2018; Ishimaru et al., 2016; Pemberton & Miller, 2015; Petridou & Karagiorgi, 2018). Active family engagement has also been positively associated with non-academic indicators of school success such as student engagement (Park & Holloway, 2017), school attendance, truancy, and dropout rates (Hornby & Blackwell, 2018; Ross, 2016), school behavior (Hornby & Blackwell, 2018; Song et al., 2019), and cognitive and emotional resilience (Wang et al., 2016). A large body of research generally supports the benefits to students' school success and academic achievement when families and schools form partnerships to promote student learning both in and out of the classroom.

The purpose of this quantitative study was to examine changes to WIF scores after participation in the FAST-AP family engagement pilot program and to examine the effect of parent participation in the FAST-AP pilot program on changes in the continuous text reading scores of first-grade students from a suburban Title I school in the Northeastern United States. The findings indicated that family participation in FAST-AP home- and school-based activities had a statistically significant positive effect on students' sight WIF. There was no finding of statistical significance of family

participation in FAST-AP on students' literacy achievement as measured by the F & P BAS continuous text reading assessment.

Family engagement falls along a continuum of behaviors, and research has found that general forms of family engagement were strong predictors of academic achievement and other measures of academic success (McDowall & Schaughency, 2017). The specific benefits of engagement practices varied according to the form of family engagement and the age of students (Alexander et al., 2017; Boonk et al., 2018; Hornby & Blackwell, 2018). While it is clear that students whose families participated in the FAST-AP family engagement program did not have statistically significant different literacy achievement as measured by the F & P BAS from students whose families did not participate, the finding is consistent with research that cites generalized benefits of family engagement (Alexander et al., 2017; Boonk et al., 2018; Hornby & Blackwell, 2018; McDowall & Schaughency, 2017). Given that FAST-AP home-based activities focused exclusively on sight word identification, it was not surprising that changes to students' timed and untimed WIF scores indicated growth equal to or greater than published projected growth. In contrast, continuous text reading growth was not statistically different when families participated in the FAST-AP pilot programs. Changes to the focus of home-based activities to include contextual sight word reading using predictable sight word texts might lead to a better understanding of the specific benefits of participation in the FAST-AP program. Future study of the FAST-AP program should investigate whether such changes impact student literacy achievement.

Despite of inconsistent study findings, the FAST-AP program conveyed benefits for students and families. FAST-AP home-based learning activities replaced traditional homework assignments for treatment school participants. Activities were designed to promote quality family interactions that simultaneously promoted language development and literacy learning (Dettmers et al., 2019). Students whose families participated in FAST-AP showed sight word fluency growth at the level of statistical significance. Although no significant difference was found between the continuous text reading outcomes of students whose families participated in the FAST-AP program and students whose families did not, promoting FAST-AP school- and home-based activities might confer additional benefits as yet unmeasured. Given that completing traditional literacy homework and participating in FAST-AP literacy activities yields comparable literacy achievement results, participating in FAST-AP activities may be preferable to families who perceive traditional homework assignments as impositions on limited family time (Dettmers et al., 2019). Participation in FAST-AP school- and home-based activities may also be preferable to educators given their potential to proffer other benefits.

References

Abbott, M. L. (2017). *Using statistics in the social and health sciences with SPSS and Excel*. Wiley.

Abtahi, Y., Graven, M., & Lerman, S. (2017). Conceptualising the more knowledgeable other within a multi-directional ZPD. *Educational Studies in Mathematics*, *96*(3), 275. https://doi.org/10.1007/s10649-017-9768-1

Academic Parent-Teacher Teams. (2017). *Academic Parent-Teacher Teams: Implementation workbook* (manual). WestEd.

Acar, I. H., Hong, S.-Y., & Wu, C. (2017). Examining the role of teacher presence and scaffolding in preschoolers' peer interactions. *European Early Childhood Education Research Journal*, *25*(6), 866–884. https://doi.org./10.1080/1350293X.2017.1380884

Ajzen, I. (n.d.). The theory of planned behavior diagram. https://www.people.umass.edu/ajzen/tpb.diag/html#null-link

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.), *Action control: From cognition to behavior* (pp. 11–39). Springer.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50,* 179–211. https://www.dphu.org/uploads/attachements/books/books_4931_0.pdf

Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology, 32*(4), 665–

683. https://www.researchgate.net/publication/227722956_Perceived_Behavioral_Control_Self-Eficacy-Locus_of_Control_and_the_Theory_of_Planned_Behavior1

Ajzen, I. (2012a). The theory of planned behavior. In P. A. M. Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of theories of social psychology* (pp. 438–459). Sage.

Ajzen, I. (2012b). Theory of planned behavior. In S. Boslaugh (Ed.), *Encyclopedia of epidemiology* (pp. 1–6). Sage Research Methods.

Ajzen, I. (2015). The theory of planned behavior is alive and well, and not ready to retire: A commentary on Sniehotta, Presseau, and Arauja-Soares. *Health Psychology Review, 9*(2), 131–137. https://doi.org/10.1080/17437199.2014.883474

Alameda-Lawson, T. (2014). A pilot study of collective parent engagement and children's academic achievement. *Children & Schools, 36*(4), 199–209. https://doi.org/10.1093/cs/cdu019

Alameda-Lawson, T., & Lawson, M. A. (2016). Ecologies of collective parent engagement in urban education. *Urban Education, 54*(8), 1085–1120. https://doi.org/10.1177/0042085916636654

Alameda-Lawson, T., & Lawson, M. A. (2019). Ecologies of collective parent engagement in urban education. *Urban Education, 54*(8), 1085–1120. https://doi.org/10.1177/0042085916636654

Albuquerque, A., & Martins, M. A. (2021). Invented spelling activities in kindergarten: the role of instructional scaffolding and collaborative learning. *International*

Journal of Early Years Education, *29*(1), 96–113. https://doi.org./10.1080/09669760.2020.1760085

Alexander, J. D., Cox, R. B., Behnke, A., & Larzelere, R. E. (2017). Is all parental "noninvolvement" equal? Barriers to involvement and their relationship to Latino academic achievement. *Hispanic Journal of Behavioral Sciences, 39*(2), 169–179. https://doi.org/10.1177/0739986317700837

Allen, M. (2017). *The sage encyclopedia of communication research methods* (Vols. 1-4). Sage Publications. https://dx.doi.org/10.4135/9781483381411

Allen, Q., & White-Smith, K. (2018). "That's why is say stay in school": Black mothers' parental involvement, cultural wealth, and exclusion in their son's schooling. *Urban education, 53*(3), 409–435. https://doi.org/10.1177/0042085917714516

Argentin, G., Barbetta, G. P., Maci, F., & Society for Research on Educational Effectiveness (2016). Increasing Parental Involvement to Promote Dropout Prevention. Lessons from an RCT in Italian Lower Secondary Schools. In *Society for Research on Educational Effectiveness*. Society for Research on Educational Effectiveness. https://search-ebscohost-com.ezp.waldenulibrary.org/login.aspx?direct=true&db=eric&AN=ED567232&site=eds-live&scope=site

Baker, T. L., Wise, J., Kelley, G., & Skiba, R. J. (2016). Identifying Barriers: Creating Solutions to Improve Family Engagement. *School Community Journal*, *26*(2), 161–184. https://search-ebscohost-

com./login.aspx?direct=true&db=eric&AN=EJ1124003&site=eds-live&scope=site

Bandura, A., & Adams, N. E. (1977). Analysis of self-efficacy theory of behavioral change. *Cognitive Therapy and Research, 1*(4), 287–310. https://doi.org/10.1007/BF01663995

Barger, M. M., Kim, E. M., Kuncel, N. R., & Pomerantz, E. M. (2019). The relation between parents' involvement in children's schooling and children's adjustment: A meta-analysis. *Psychological Bulletin*, *145*(9), 855–890. https://doi.org./10.1037/bul0000201.supp

Battaglia, M. P. (2011). Purposive sample. In P. J. Lavrakas (Ed.), *Encyclopedia of survey research methods* (pp. 1–3). Sage Research Methods.

Black, S., & Allen, J. D. (2018). Part 5: Learning is a Social Act. *Reference Librarian*, *59*(2), 76–91. https://doi.org./10.1080/02763877.2017.1400932

Boonk, L., Gijselaers, H. J. M., Ritzen, H., & Brand-Gruwel, S. (2018). A review of the relationship between parental involvement indicators and academic achievement. *Educational Research Review*, *24*, 10–30. https://doi.org/10.1016/j.edurev.2018.02.001

Bracke, D., & Cortes, D. (2012). Parental involvement and the theory of planned behavior. *Education, 133*(1), 188–201. https://www.researchgate.net/publication/302415217

Brice, J. (2014, April 8). Department of Education releases new parent and community engagement framework. *U. S. Department of Education.*

https://blog.ed.gov/2014/04/department-of-education-releases-new-parent-and-community-engagement-framework/

Brown, C. L., Schell, R., Denton, R., & Knode, E. (2019). Family literacy coaching: Partnering with parents for reading success. *School Community Journal, 29*(1), 63–86. https://search-ebscohost-com./login.aspx?direct=true&db=eric&AN=EJ1219795&site=eds-live&scope=site

Brown, S. (2016). Story nights: An apprenticeship into literacy through bilingual story reading. *Teaching Education, 27*(3), 286–304. https://doi.org/10.1080/10476210.2016.1143459

Bubic, A., & Tosic, A. (2016). The relevance of parents' beliefs for their involvement in children's school life. *Educational Studies, 42*(5), 519–533. https://doi.org/10.1080/03055698.2016.1230049

Burkholder, G. J., Cox, K. A., & Crawford, L. M. (2016). *The scholar-practitioner's guide to research design.* Laureate Publishing.

Calzada, E. J., Huang, K.-Y., Hernandez, M., Soriano, E., Acra, C. F., Dawson-McClure, S., Kamboukos, D., & Brotman, L. (2015). Family and Teacher Characteristics as Predictors of Parent Involvement in Education During Early Childhood Among Afro-Caribbean and Latino Immigrant Families. *Urban Education*, *50*(7), 870–896. https://doi.org./10.1177/0042085914534862

Chitooran, M. M. (2018). Scaffolding. In B. B. Frey (Ed.), *The Sage Encyclopedia of Educational Research, Measurement, and Evaluation* (pp. 1452-–454). Sage. https://dx.doi.org/10.4135/9781506326139

Clark, K. R. (2018). Learning theories: Constructivism. *Radiologic Technology, 90*(2), 180–182. https://search-ebscohost-com./login.aspx?direct=true&db=rzh&AN=132750222&site=eds-live&scope=site

Cohen, E. (2010). Word identification fluency probe grade one. *CREC.* http://www.mpspride.org/uploaded/District_Office/Departments/Curriculum_and_Instruction/Files/Progress_Monitoring/ELA/WIF/WIF_1.pdf

Cohen, J. (1992). A power primer. In A. E. Kazdin (Ed.), *Methodological issues and strategies in clinical research., 4th ed.* (pp. 279–284). American Psychological Association. https://doi-org.ezp.waldenulibrary.org/10.1037/14805-018

Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). Routledge.

Colgate, O., Ginns, P., & Bagnall, N. (2017). The role of invitations to parents in the completion of a children's home reading challenge. *Educational Psychology, 37*(3), 298–311. https://doi.org/10.1080/01443410.2016.1165799

Cooke, R., Dahdah, M., Norman, P., & French, D. P. (2016). How well does the theory of planned behaviour predict alcohol consumption? A systematic review and meta-analysis. *Health Psychology Review,* 10(2), 148–167. https://doi.org/10.1080/17437199.2014.947547

Crawford, E. R. (2017). The Ethic of Community and Incorporating Undocumented Immigrant Concerns into Ethical School Leadership. *Educational Administration Quarterly*, *53*(2), 147–179. https://doi.org/10.1177/0013161X16687005

Creswell, J. W. (2014). *Research design: Quantitative, qualitative, and mixed methods approaches* (4th ed.). Sage.

Crosby, S. A., Rasinski, T., Padak, N., & Yildirim, K. (2015). A 3-year study of a school-based parental involvement program in early literacy. *The Journal of Educational Research*, *108*(2), 165–172. https://doi.org/10.1080/00220671.2013.867472

Curry, K. A., & Holter, A. (2019). The Influence of Parent Social Networks on Parent Perceptions and Motivation for Involvement. *Urban Education*, *54*(4), 535–563. https://doi.org/10.1177/0042085915623334

Daniel, J. (2012). Choosing between nonprobability sampling and probability sampling. In Daniel, J. *Sampling essentials: Practical guidelines for making sampling choices* (pp. 66–80). Thousand Oaks, CA: Sage Publications. https://dx.doi.org/10.4135/9781452272047

Davenport, C. A., Konrad, M., & Alber-Morgan, S. R. (2019). Effects of Reading Racetracks on sight word acquisition for deaf kindergarteners. *Journal of Deaf Studies & Deaf Education*, *24*(2), 173–185. http://doi.org/10.1093/deafed/eny038

Degol, J. L., Wang, M.-T., Ye, F., & Zhang, C. (2017). Who makes the cut? Parental involvement and math trajectories predicting college enrollment. *Journal of Applied Developmental Psychology*, *50*, 60–70. https://doi.org./10.1016/j.appdev.2017.03.007

Dettmers, S., Yotodying, S., & Jonkmann, K. (2019). Antecedents and outcomes of parental homework involvement: How do family-school partnerships affect parental homework involvement and student outcomes? *Frontiers in Psychology, 10.* https://doi.org./10.3389/fpsyg.2019.01048

Doctoroff, G. L., & Arnold, D. H. (2017). Doing homework together: The relation between parenting strategies, child engagement, and achievement. *Journal of Applied Development Psychology, 48*(2017), 103–113. https://doi.org/10.1016/j.appdev.2017.01.001

Dolch, E. W. (1936). A basic sight vocabulary. *The Elementary School Journal, 36*(6), 456–460. https://www.jstor.org/stable/995914

Dotterer, A. M., & Wehrspann, E. (2016). Parent involvement and academic outcomes among urban adolescents: Examining the role of school engagement. *Educational Psychology, 36*(4), 812–830. https://doi.org/10.1080/01443410.2015.1099617

Drew, C. J., Hardman, M. L., & Hosp, J. L. (2008). *Designing and conducting research in education*. SAGE Publications. https://www.doi.org/10.4135/9781483385648

Epstein, J. L. (2018). School, family, and community partnerships, 2nd ed. Westview Press.

Eun, B. (2019). The zone of proximal development as an overarching concept: A framework for synthesizing Vygotsky's theories. *Educational Philosophy & Theory*, *51*(1), 18–30. https://doi.org./10.1080/00131857.2017.1421941

Every Student Succeeds Act, 20 U.S.C. § 6301 (2015). https://www.congress.gov/bill/114th-congress/senate-bill/1177

Fagan, J., Iglesias, A., & Kaufman, R. (2016). Associations among Head Start fathers' involvement with their preschoolers and child language skills. *Early Childhood Development and Care, 186*(8), 1342–1356. https://doi.org/10.1080/03004430.2015.1094654

Fan, W., Li, N., & Sandoval, J. R. (2018). A reformulated model of barriers to parental involvement in education: Comment on Hornby and Lafaele (2011). *Educational Review, 70*(1), 120–127. https://doi.org/10.1080/00131911.2018.1388614

Fountas, I., & Pinnell, G. S. (2010). *Fountas & Pinnell benchmark assessment system: Grades K-2*. Heinemann.

Frey, B. (2018). *The Sage encyclopedia of educational research, measurement, and evaluation* (Vols. 1–4). Thousand Oaks, CA: Sage Publications, Inc. https://doi.org/10.4135/9781506326139

Fuchs, L. S., & Fuchs, D. (1993). Formative evaluation of academic progress: How much growth can we expect? *School Psychology Review*, *22*(1), 27. https://doi.org/10.1080/02796015.1993.12085636

Fuchs, L. S., & Fuchs, D. (2011). Using CBM for Progress Monitoring in Reading. *National Center on Student Progress Monitoring*. https://files.eric.ed.gov/fulltext/ED519252.pdf

Fuchs, L. S., Fuchs, D., & Compton, D. L. (2004). Monitoring early reading development in first grade: Word identification fluency versus nonsense word fluency. *Exceptional Children, 71*(1), 7–21. https://doi.org/10.1177/001440290407100101

Gerzel-Short, L. (2018). “We conquered this together”: Tier 2 collaboration with families. *School-Community Journal, 28*(2), 85–112. https://files.eric.ed.gov/fulltext/EJ1201949.pdf

Gibbon, J. M., Duffield, S., Hoffman, J., & Wageman, J. J. (2017). Effects of educational games on sight word reading achievement and student motivation. *Journal of Language and Literacy Education, 13*(2), 1-–7. https://search-ebscohost-com./login.aspx?direct=true&db=eue&AN=129583753&site=eds-live&scope=site

Girardelli, D., & Patel, V. K. (2016). The theory of planned behavior and Chines ESL students’ in-class participation. *Journal of Language Teaching and Research, 7*(1), 31–41. http://doi.org/10.17507/jltr.0701.04

Gonzales, S. M., & Gabel, S. L. (2017). Exploring Involvement Expectations for Culturally and Linguistically Diverse Parents: What We Need to Know in Teacher Education. *International Journal of Multicultural Education*, *19*(2), 61–81. https://search-ebscohost-com./login.aspx?direct=true&db=eric&AN=EJ1148047&site=eds-live&scope=site

Grijalva-Quiñonez, C. S., Valdés-Cuervo, A. A., Parra-Pérez, L. G., & Vázquez, G. (2020). Parental Involvement in Mexican Elementary Students’ Homework: Its Relation with Academic Self-Efficacy, Self-Regulated Learning, and Academic Achievement. *Psicología Educativa: Revista de Los Psicólogos de La Educación*, *26*(2), 129–136. https://doi.org./10.5093/psed2020a5

Grünke, M. (2019). The Effects of Reading Racetracks on the Sight Word Recognition of Four Elementary School Students with Learning Difficulties. *International Electronic Journal of Elementary Education*, *11*(4), 291–297. https://doi.org/10.26822/iejee.2019450787

Hamlin, D., & Flessa, J. (2018). Parental involvement initiatives: An analysis. *Educational Policy, 32*(25), 697–727. https://doi.org/10.1177/0895904816673739

Hampden-Thompson, G., & Galindo, C. (2017). School-family relationships, school satisfaction and the academic achievement of young people. *Educational Review, 69*(2), 248–265. https://doi.org/10.1080/00131911.2016.1207613

Hannon, P., Nutbrown, C., & Morgan, A. (2020). Effects of Extending Disadvantaged Families' Teaching of Emergent Literacy. *Research Papers in Education*, *35*(3), 310–336. https://doi.org/10.1080/02671522.2019.1568531

Hasbrouck, J., & Tindal, G. (2017). An update to compiled ORF norms (Technical Report No 1702). Behavioral Research and Teaching, University of Oregon. https://files.eric.ed.gov/fulltext/ED594994.pdf

Hendricks, K. S. (2016). The Sources of Self-Efficacy: Educational Research and Implications for Music. *Update: Applications of Research in Music Education*, *35*(1), 32–38. https://doi.org/10.1177/8755123315576535

Hoaglin, D. C., & Inglewicz, B. (1987). Fine tuning some resistant rules for outlier labeling. *Journal of American Statistical Association, 82*, 1147–1149. https://doi.org/10.2307/2289392

Hoover-Dempsey, K. V., & Sandler, H. M. (1995). Parental involvement in children's education: Why does it make a difference? *Teachers College Record, 97*(2), 310–331. https://www.academia.edu/1338702/Parental_involvement_in_childrens_education_Why_does_it_make_a_difference

Hoover-Dempsey, K. V., & Sandler, H. M. (1997). Why do parents become involved in their children's education? *Review of Educational Research, 67*(1), 3–42. https://doi.org/10.3102/00346543067001003

Hoover-Dempsey, K. V., Walker, J. M. T., Sandler, H. M., Whetsel, D., Green, C. L., Wilkins, A. S., & Closson, K. (2005). Why do parents become involved? Research finding and implications. *The Elementary School Journal, 106*(2), 105–130. https://doi.org/10.1086/499194

Hornby, G., & Blackwell, I. (2018). Barriers to parental involvement in education: An update. *Educational Review, 70*(1), 109–119. https://doi.org/10/1080/00131911.2018.1388612

Hosp, M. K., Hosp, J. L., & Howell, K. W. (2007). *The ABCs of CBM.* Guilford.

Houston Independent School District, Department of Research and Accountability. (2019). Title I, Part A Parent and Family Engagement, 2017–2018. Research Educational Program Report. In *Houston Independent School District.* Houston Independent School District. https://files.eric.ed.gov/fulltext/ED598114.pdf

Ishimaru, A. M. (2019). From family engagement to equitable collaboration. *Educational Policy, 33*(2), 350–385. https://doi.org/10.1177/0895904817691841

Ishimaru, A. M., Torres, K. E., Salvador, J. E., Lott, J., II, Williams, D. M. C., & Tran, C. (2016). Reinforcing deficit, journeying toward equity: Cultural brokering in family education initiatives. *American Educational Research Journal, 53*(4), 850–882. https://doi.org/10.3102/0002831216657178

Jacobs, B., & Usher, A. (2018). Proximity as a window into the zone of proximal development. *Literacy Information and Computer Education Journal, 9*(1), 2856–2863. http://infonomics-society.org/wp-content/uploads/licej/published-papers/volume-9-2018/Proximity-as-a-Window-into-the-Zone-of-Proximal-Development.pdf

Jeffco Research and Assessment Design. (2016). *APTT How to guide 2015–16.* Jeffco Public Schools. https://jeffco.ss12.sharpschool.com/UserFiles/Servers/Server_627881/File/APTT%20How%20to%20Guide%20_PDF.pdf

Jeynes, W. (2014). Parent involvement for urban students and youth of color. In H. R. Milner, & L Lomotoy (Eds.), *Handbook of urban education* (428–473). Routledge. https://books.google.com/books?hl=en&lr=&id=COQkAgAAQBAJ&oi=fnd&pg=PA149&dq=Parent+involvement+for+urban+students+and+youth+of+color&ots=ltmwB7T3JK&sig=zVk1sCbhW5IeIOd1yA9ptXzW8G0#v=onepage&q=Parent%20involvement%20for%20urban%20students%20and%20youth%20of%20color&f=false

Jeynes, W. H. (2011). *Parent Involvement and Academic Success.* Routledge.

Knapp, H. (2018). Paired *t* test and Wilcoxon test. In Knapp, H. *Intermediate statistics using SPSS* (pp. 199–221). Thousand Oaks, CA: Sage Publications, Inc. https://doi.org./10.4135/9781071802625

Lämsä, J., Hämäläinen, R., Aro, M., Koskimaa, R., & Äyrämö, S. (2018). Games for enhancing basic reading and maths skills: A systematic review of educational game design in supporting learning by people with learning disabilities. *British Journal of Educational Technology*, *49*(4), 596–607. https://doi.org./10.1111/bjet.12639

Latunde, Y., & Clark-Louque, A. (2016). Untapped resources: Black parent engagement that contributes to learning. *The Journal of Negro Education, 85*(1), 72–81. https://doi.org./10.7709/jnegroeducation.85.1.0072

Lawson, M. A., & Alameda-Lawson, T. (2012). A case study of school-linked, collective parent engagement. *American Educational Research Journal,* 49(4), 651–684. https://doi.org/10.3102/0002831211427206

Lechuga-Peña, S., Becerra, D., Mitchell, F. M., Lopez, K., & Sangalang, C. C. (2019). Subsidized Housing and Low-Income Mother's School-Based Parent Involvement: Findings from the Fragile Families and Child Wellbeing Study Wave Five. *Child & Youth Care Forum*, *48*(3), 323–338. https://doi.org./10.1007/s10566-018-9481-y

Lingwood, J., Levy, R., Billington, J., & Rowland, C. (2020). Barriers and Solutions to Participation in Family-Based Education Interventions. *International Journal of*

Social Research Methodology, *23*(2), 185–198. https://doi.org/10.1080/13645579.2019.1645377

Mapp, K. L., & Kuttner, P. J. (2013). Partners in Education: A Dual Capacity-Building Framework for Family-School Partnerships. In *SEDL*. SEDL. https://www2.ed.gov/documents/family-community/partners-education.pdf

Markova, I. (2017). Effects of Academic and Non-Academic Instructional Approaches on Preschool English Language Learners' Classroom Engagement and English Language Development. *Journal of Early Childhood Research*, *15*(4), 339–358. https://doi.org/10.1177/1476718X15609390

Markow, D., & Martin, S. (1989). *The Metropolitan Life survey of the American teacher: Preparing schools for the 1990s*. Harris Interactive. https://files.eric.ed.gov/fulltext/ED530021.pdf

McCormick, M. P., Weissman, A. K., Weiland, C., Hsueh, J., Sachs, J., & Snow, C. (2020). Time well spent: Home learning activities and gains in children's academic skills in the prekindergarten year. *Developmental Psychology, 56*(4), 710–726. https://doi.org/10.1037/dev0000891

McDowall, P. S., & Schaughency, E. (2017). Elementary school parent engagement efforts: Relations with educator perceptions and school characteristics. *The Journal of Educational Research, 11*(4), 348–365. https://doi.org/10.1080/00220671.2015.1103687

McGregor, S. A., & Knoll, M. A. (2015). The theory of planned behaviour as a framework for understanding parental experiences with homework. *Educational*

Psychology in Practice, 31(4), 335–353. http://dx.doi.org/10.1080/02667363.2015.1065472

Meltzoff, J., & Cooper, H. (2018). Research designs and threats to internal validity. In *Critical thinking about research: Psychology and related fields., 2nd ed.* (pp. 97–116). American Psychological Association. https://doi.org./10.1037/0000052-007

Mendez, J. L., & Swick, D. C. (2018). Guilford Parent Academy: A Collaborative Effort to Engage Parents in Children's Education. *Education and Treatment of Children*, *41*(2), 249–268. https://doi.org./10.1353/etc.2018.0011

Naqvi, R., Carey, J., Cummins, J., & Altidor-Brooks, A. (2015). The role of identity narratives in overcoming barriers to parental engagement. *TESOL in Context, 25*(1), 16–33. https://doi.org/10.3316/aeipt.212396

No Child Left Behind Act of 2001, P.L. 107-110, 20 U.S.C. § 6319 (2002). https://www.congress.gov/bill/107th-congress/house-bill/1

Paredes, M. C. (2017). Academic Parent-Teacher Teams: Implementation workbook (Manual). West Ed.

Park, S., & Holloway, S. D. (2017). The effects of school-based parental involvement on academic achievement at the child and elementary school level: A longitudinal study. *Journal of Educational Research*, *110*(1), 1–16. https://doi.org./10.1080/00220671.2015.1016600

Pemberton, K. D., & Miller, S. (2015). Building home-school relationships to enhance reading achievement for students from families with limited resources. *Education and Urban Society, 47*(7), 743–765. https://doi.org./10.1177/0013124513508979

Petridou, A., & Karagiorgi, Y. (2018). Parental involvement and risk for school failure. *Journal of Education for Students Placed at Risk, 23*(4), 359–380. https://doi.org.ezp./10.1080/10824669.2018.1523733

Petrová, Z., Zápotočná, O., Urban, K., & Urban, M. (2020). Development of early literacy skills: A Comparison of two early literacy programmes. *Journal of Pedagogy / Pedagogický Casopis*, *11*(2), 51–72. https://doi.org./10.2478/jped-2020-0011

Portwood, S. G., Brooks-Nelson, E., & Schoenberger, J. (2015). Data and evaluation strategies to support parent engagement programs: Learnings from an evaluation of Parent University. *Children and Schools, 37*(3), 145–153. https://doi.org./10.1093/cs/cdv018

Povey, J., Campbell, A. K., Willis, L.-D., Haynes, M., Western, M., Bennett, S., Antrobus, E., & Pedde, C. (2016). Engaging parents in schools and building parent-school partnerships: The role of school and parent organisation leadership. *International Journal of Educational Research*, *79*, 128–141. https://doi.org./10.1016/j.ijer.2016.07.005

Razfar, A., & Gutierrez, K. (2003). Reconceptualizing early childhood literacy: The sociocultural influence. In N. Hall, J. Larson, & J. Marsh (Eds)., *Handbook of*

Early Childhood Literacy (pp. 34–48). Sage. http://dx.doi.org/10.4135/9781848608207.n4

Reynolds, K. R. (2018). *Families and Schools Together in Academic Partnerships (FAST-AP)* [Unpublished manuscript]. Manchester Public Schools.

Robinson, D. V. (2017). Collaborative partnerships between high poverty and minority parents and educational leaders: Reversing the school and home divide. *Journal for Multicultural Education*, *11*(1), 2–18. https://doi.org./10.1108/JME-11-2015-0035

Rosário, P., Carlos Núñez, J., Vallejo, G., Nunes, T., Cunha, J., Fuentes, S., & Valle, A. (2018). Homework purposes, homework behaviors, and academic achievement. Examining the mediating role of students' perceived homework quality. *Contemporary Educational Psychology*, *53*, 168–180. https://doi.org./10.1016/j.cedpsych.2018.04.001

Ross, T. (2016). The Differential Effects of Parental Involvement on High School Completion and Postsecondary Attendance. *Education Policy Analysis Archives*, *24*(30). https://doi.org.10.14507/epaa.24.2030

Rowe, R., Andrews, E., Harris, P. R., Armitage, C. J., McKenna, F. P., & Norman, P. (2016). Identifying beliefs underlying pre-drivers' intentions to take risks: An application of the theory of planned behavior. *Accident Analysis and Prevention, 89*(2016), 49–56. https://doi.org/10.1016/j.aap.2015.12.024

Salkind, N. J. (2010). *Encyclopedia of research design.* Thousand Oaks, CA: Sage Publications. http://dx.doi.org/10.4135/9781412961288

Sanzone, J. L., Johnston, E. M., D'Andrea Montalbano, P., & Denis, I. (2018). Evaluation of Academic Parent-Teacher Teams in New York City middle schools. Center for Policy, Research, and Evaluation, Metropolitan Center for Research on Equity and the Transformation of Schools. New York University. https://research.steinhardt.nyu.edu/scmsAdmin/media/users/atn293/pre/aptt-report-final.pdf?_ga=2.12527088.532259010.1619042538-778812972.1619042538

Sebastian, J., Moon, J., & Cunningham, M. (2017). The relationship of school-based parental involvement with student achievement: A comparison of principal and parent survey reports from PISA 2012. *Educational Studies, 43*(2), 123–146. https://doi.org/10.1080/03055698.2016.1248900

Sebolt, S. (2018). Capitalizing on Funds of Knowledge to Support Family Engagement, Kappa Delta Pi Record, *54*(3), 130–134. https://doi.org/10.1080/00228958.2018.1481660

Sénéchal, M., LeFevre, J.-A., Smith-Chant, B. L., & Colton, K. V. (2001). On Refining Theoretical Models of Emergent Literacy: The Role of Empirical Evidence. *Journal of School Psychology*, *39*(5), 439–460. https://doi.org./10.1016/S0022-4405(01)00081-4

Silalahi, R. M. (2019). Understanding Vygotsky's Zone of Proximal Development for Learning. *Polyglot: Jurnal Ilmiah*, *15*(2), 169–186. https://doi.org.ezp./10.19166/pji.v15i2.1544

Silinskas, G., & Kikas, E. (2019). Math homework: Parental help and children's academic outcomes. *Contemporary Educational Psychology*, *59*. https://doi.org./10.1016/j.cedpsych.2019.101784

Smagorinsky, P. (2013). What Does Vygotsky Provide for the 21st-Century Language Arts Teacher? *Language Arts*, *90*(3), 192–204. https://www.academia.edu/9154836/Smagorinsky_P_2013_What_does_Vygotsky_provide_for_the_21st_century_Language_Arts_teacher_Language_Arts_90_190_202?auto=download

Smalls Glover, C., Smith, E., Yu, D., & Lewis, C. (2019). Families and community-based programs: Characteristics, engagement, and dissemination. In B. H. Fiese, M. Celano, K. Deater-Deckard, E. N. Jouriles, & M. A. Whisman (Eds.), *APA handbook of contemporary family psychology: Applications and broad impact of family psychology., Vol. 2.* (pp. 351–364). American Psychological Association. https://doi.org./10.1037/0000100-022

Smetzer-Anderson, S., & Roessler, J. (2016). "Buy-in" vs. "allowed in": Lessons learned in family engagement program recruitment and retention. *Voices in Urban Education,* 44, 53–63. https://files.eric.ed.gov/fulltext/EJ1111064.pdf

Song, W., Qian, X., & Goodnight, B. (2019). Examining the roles of parents and community involvement and prevention programs in reducing school violence. *Journal of School Violence,18*(3), 403–420. https://www.doi.org/10.1080/15388220.2018.1512415

Stedman, J. B., & Riddle, W. C. (1998). Goals 2000: Educate America Act implementation status and issues. *Congressional Research Service* https://www.everycrsreport.com/files/19980217_95-502_65e152737be601a71d0b2053f2ab8559c514f092.pdf

Steinmetz, H., Knappstein, M., Ajzen, I., & Kabst, R. (2016). How effective are behavior change interventions based on the theory of planned behavior? *Zeitschrift fur Psychologties, 224*(3), 216–233. https://doi.org/10.1027/2151-2604/a000255

Sulzby, E., & Teale, W. H. (1991). Emergent literacy. In P. D. Pearson, R. Barr, M. L. Kamil, & P. Mosenthal (Eds.), *Handbook of reading and research,* 2nd ed. (pp. 727–757). Longman.

Taylor, C. N., Aguilar, L., Burns, M. K., Preast, J. L., & Warmbold-Brann, K. (2018). Reliability and Relationship to Retention of Assessing an Acquisition Rate for Sight Words with Kindergarten Students. *Journal of Psychoeducational Assessment*, *36*(8), 798–807. https://doi.org/10.1177/0734282917707144

Teale, W. H. (1986). Home background and young children's literacy development. In W. H. Teale & E. Sulzby (Eds.), *Emergent Literacy: Writing and reading,* (pp. 173–206). Ablex.

Tharp, R. G. (1997). *From At-Risk to Excellence: Research, Theory, and Principles for Practice*. University of California, Center for Research on Education, Diversity, and Excellence.

Tharp, R. G., & Gallimore, R. (1991). Rousing minds to life: Teaching, learning, and schooling in social context. Cambridge University Press.

Tindal, G., & Nese, J. F. T. (2013). *Oral reading fluency growth: a sample of methodology and findings.* Retrieved from the National Center on Assessment and Accountability for Special Education (NCAASE). http://ncaase.com/publications/in-briefs

Urban, J. B., & van Eeden-Moorefield, B. M. (2018). Establishing validity for qualitative studies. In *Designing and proposing your research project* (pp. 117). American Psychological Association. https://dx.doi.org/10.1037/0000049-009

https://www2.ed.gov/programs/titleiparta/parentinvguid.doc

U. S. Department of Education Office of Research. (1992, December). Education Consumer Guide: Reading Recovery. Retrieved from https://www2.ed.gov/pubs/OR/ConsumerGuides/readrec.html

U.S. Department of Health and Human Services & U.S. Department of Education. (2016, May 5). *Policy statement on family engagement from the early years to the early grades.* Retrieved from https://www2.ed.gov/about/inits/ed/earlylearning/files/policy-statement-on-family-engagement.pdf

Van Oers, B. (2020). Lev Vygotsky. In D. T. Cook (Ed.), The Sage Encylopedia of Children and Childhood Studies pp. 1642–1646). Sage. http://dx.doi.org/10.4135/9781529714388.n614

Vassallo, B. (2018). Promoting parental involvement in multicultural schools: Implications for educators. *The Online Journal of New Horizons in Education, 8*(2), 101–107. https://www.tojned.net/journals/tojned/articles/v08i02/v08i02-13.pdf

Vera, E. M., Heineke, A., Carr, A. L., Camacho, D., Israel, M. S., Goldberger, N., Clawson, A., & Hill, M. (2017). Latino Parents of English Learners in Catholic Schools: Home vs. School Based Educational Involvement. *Journal of Catholic Education*, *20*(2), 1–29. https://doi.org./10.15365/joce.2002012017

Veraksa, N., Shiyan, O., Shiyan, I., Pramling, N., & Pramling-Samuelsson, I. (2016). Communication between teacher and child in early child education: Vygotskian theory and educational practice/La comunicacion entre profesor y alumno en la educacion infantil: la teoria vygotskiana y la practica educativa. *Infancia y Aprendizaje*, *39*(2), 221–243. https://doi.org./10.1080/02103702.2015.1133091

Vygotsky, L. (1978). Interaction between learning and development. In Vygotsky, L, *Mind in Society*, pp. 79–91. Cambridge, MA: Harvard University Press.

Walden University. (2020). *2019-2020 Walden University student handbook.* https://catalog.waldenu.edu

Walker, J. M. (2016). Realizing the American dream: A parent education program designed to increase Latino family engagement in children's education. *Journal of Latinos and Education, 15*(4), 344–357. https://doi.org/10.1080/15348431.2015.1134536

Walker, J. M. T., Ice, C. L., Hoover-Dempsey, K. V., & Sandler, H. M. (2011). Latino parents' motivations for involvement in their children's schooling: An exploratory study. *The Elementary School Journal, 111*(3), 409–429. https://search-ebscohost-com.ezp.waldenulibrary.org/login.aspx?direct=true&db=edsgea&AN=edsgcl.250133826&site=eds-live&scope=site

Walker, J. M. T., Wilkins, A. S., Sandler, H. M., & Hoover-Dempsey, K. V. (2005). Parental involvement: Model revision through scale development. *The Elementary School Journal, 106*(2), 85–104. https://doi.org/10.1086/499193

Wang, Y., Deng, C., & Yang, X. (2016). Family economic status and parental involvement: Influences of parental expectation and perceived barriers. *School Psychology International, 37*(5), 536–553. https://doi.org/10.1177/0143034316667646

Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *17*(2), 89–100. https://doi.org./10.1111/j.1469-7610.1976.tb00381.x

Yamamoto, Y., Holloway, S. D., & Suzuki, S. (2016). Parental engagement in children's education: Motivating factors in Japan and the U.S. *School Community Journal, 26*(1), 45–66. http://www.schoolcommunitynetwork.org/SCJ.aspx

Zumeta, R. O., Compton, D. L., & Fuchs, L. S. (2012). Using word identification fluency to monitor first-grade reading development. *Exceptional Children*, *78*(2), 201. https://doi.org/10.1177/001440291207800204

Appendix A: Data Use Agreement

DATA USE AGREEMENT

This Data Use Agreement ("Agreement"), effective as of 8/20/20 ("Effective Date"), is entered into by and between Kathleen S. Reynolds ("Data Recipient") and the [redacted] ("Data Provider"). The purpose of this Agreement is to provide Data Recipient with access to a Limited Data Set ("LDS") for use in research in accord with the HIPAA and FERPA Regulations.

1. Definitions. Unless otherwise specified in this Agreement, all capitalized terms used in this Agreement not otherwise defined have the meaning established for purposes of the "HIPAA Regulations" codified at Title 45 parts 160 through 164 of the United States Code of Federal Regulations, as amended from time to time.

2. Preparation of the LDS. Data Provider shall prepare and furnish to Data Recipient a LDS in accord with any applicable HIPAA or FERPA Regulations.

3. Data to be included in the LDS. **No direct identifiers such as names may be included in the Limited Data Set (LDS).** The researcher will not name the Data Provider in the doctoral study that is published in Proquest unless the Data Provider makes a written request for the researcher to do so. In preparing the LDS, Data Provider or designee shall include the **data fields specified as follows**, which are the minimum necessary to accomplish the research: 2018-2019 first-grade F & P BAS, WIF, and Dolch sight word inventory data; FAST-AP homework logs, and family attendance sheets from FAST-AP family meetings.

4. Responsibilities of Data Recipient. Data Recipient agrees to:

a. Use or disclose the LDS only as permitted by this Agreement or as required by law;

b. Use appropriate safeguards to prevent use or disclosure of the LDS other than as permitted by this Agreement or required by law;

c. Report to Data Provider any use or disclosure of the LDS of which it becomes aware that is not permitted by this Agreement or required by law;

d. Require any of its subcontractors or agents that receive or have access to the LDS to agree to the same restrictions and conditions on the use and/or disclosure of the LDS that apply to Data Recipient under this Agreement; and

e. Not use the information in the LDS to identify or contact the individuals who are data subjects.

5. Permitted Uses and Disclosures of the LDS. Data Recipient may use and/or disclose the LDS for its research activities only.

6. Term and Termination.

a. Term. The term of this Agreement shall commence as of the Effective Date and shall continue for so long as Data Recipient retains the LDS, unless sooner terminated as set forth in this Agreement.

b. Termination by Data Recipient. Data Recipient may terminate this agreement at any time by notifying the Data Provider and returning or destroying the LDS.

c. Termination by Data Provider. Data Provider may terminate this agreement at any time by providing thirty (30) days prior written notice to Data Recipient.

d. For Breach. Data Provider shall provide written notice to Data Recipient within ten (10) days of any determination that Data Recipient has breached a material term of this Agreement. Data Provider shall afford

Data Recipient an opportunity to cure said alleged material breach upon mutually agreeable terms. Failure to agree on mutually agreeable terms for cure within thirty (30) days shall be grounds for the immediate termination of this Agreement by Data Provider.

e. Effect of Termination. Sections 1, 4, 5, 6(e) and 7 of this Agreement shall survive any termination of this Agreement under subsections c or d.

7. Miscellaneous.

a. Change in Law. The parties agree to negotiate in good faith to amend this Agreement to comport with changes in federal law that materially alter either or both parties' obligations under this Agreement. Provided however, that if the parties are unable to agree to mutually acceptable amendment(s) by the compliance date of the change in applicable law or regulations, either Party may terminate this Agreement as provided in section 6.

b. Construction of Terms. The terms of this Agreement shall be construed to give effect to applicable federal interpretative guidance regarding the HIPAA Regulations.

c. No Third-Party Beneficiaries. Nothing in this Agreement shall confer upon any person other than the parties and their respective successors or assigns, any rights, remedies, obligations, or liabilities whatsoever.

d. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

e. Headings. The headings and other captions in this Agreement are for convenience and reference only and shall not be used in interpreting, construing or enforcing any of the provisions of this Agreement.

IN WITNESS WHEREOF, each of the undersigned has caused this Agreement to be duly executed in its name and on its behalf.

DATA PROVIDER	**DATA RECIPIENT**
Signed: [redacted]	Signed: _____
Print Name: [redacted]	Print Name: _____
Print Title: Superintendent of Schools	Print Title: _____

Appendix B: Addendum to Data Use Agreement

Data Use Agreement Addendum

This Data Use Agreement Addendum ("Agreement"), effective as of 11/17/20 ("Effective Date"), updates the original Data Use Agreement between Kathleen S. Reynolds ("Data Recipient") and the [redacted] ("Data Provider") dated 8/20/20. The purpose of this Agreement Addendum is to amend the data requested and stipulate the sources of the limited data set to be provided by the Manchester Public Schools to Kathleen S. Reynolds for use in research in accord with the HIPAA and FERPA Regulations.

The data request includes 2018-2019 first-grade F & P BAS, WIF, and Dolch sight word inventory data from Martin Elementary School and Washington Elementary School, of the Manchester Public Schools System.

Data Provider	**Data Recipient**
Signed: [redacted]	Signed: _____
Print Name: [redacted]	Print Name: _____
Print Title: Superintendent	Print Title: _____