Assessing the Effectiveness of Pull-Out Programs for Struggling Readers in Grades K-8

Gloria Agumagu

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ASSESSING THE EFFECTIVENESS OF PULL-OUT PROGRAMS FOR STRUGGLING READERS IN GRADES K-8

A Dissertation
Submitted to the School of Education

Duquesne University

In partial fulfillment of the requirements for
the degree of Doctor of Education

By
Gloria Agumagu

August 2020
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Submitted in Partial fulfillment of the Requirements
For the Degree of Doctor of Education (Ed.D.)

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“Assessing the Effectiveness of Pull-Out Programs for Struggling Readers in Grades K-8”

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ABSTRACT

ASSESSING THE EFFECTIVENESS OF PULL-OUT PROGRAMS FOR STRUGGLING READERS IN GRADES K-8

By

Gloria Agumagu

August 2020

Dissertation supervised by Gibbs Kanyongo, Ph.D.

Reading is one of the most important fundamental skills for academic success, yet the teaching of reading is very complex. The purpose of this study was to examine the effectiveness of pull-out reading interventions for struggling readers in grades K-8. The objective was to determine if there would be statistically significant mean differences between participants’ performance in reading following interventions. In a sample of immigrant “at-risk” students, \( n = 253 \) drawn from Catholic schools in the District of Columbia, dependent sample \( t \) tests revealed significant effects of pull-out interventions. On average, pull-out interventions improved participants’ performance in reading and comprehension at middle of the year assessment (\( M = 44.087, SE = 1.191 \)) more than their performance at the beginning of the year (\( M = 35.024, SE: 1.153 \), \( t \) (252) = -10.654, \( p < .001, r = .56 \). Participants also performed significantly better at the end of the year (\( M = 52.676, SE = 1.189 \)) than they did at the middle of
the year assessment ($M = 44.087, SE = 1.191), t (252) = - 17.839, p < .001, r = .75. Analyses indicated the effectiveness of the pull-out interventions as a means of reducing participants’ deficiencies in reading and comprehension. The large sizes of the effect revealed the practical usefulness of pull-out interventions in addressing reading and comprehension difficulties among struggling readers. Findings have implications for addressing reading and comprehension needs of students especially those of immigrant and low socioeconomic backgrounds. They have implications for teaching and educational leadership and administration.
DEDICATION

I dedicate this dissertation to God, my religious community, the Handmaids of the Holy Child Jesus (HHCJ) and to the memory of my late parents Chief Solomon Agumagu and Mrs. Cecilia Agumagu. God’s mercy endures forever!
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Chapter 1: INTRODUCTION

This chapter explored how structural inequalities associated with students' socioeconomic status and immigrant status can serve to reduce the effectiveness of reading intervention programs. It is imperative that second-language student learners receive adequate reading support as, from a school and district perspective, a disproportionate number of second-language students are failing vital reading assessments. In fact, between 11% and 43% of students identified as students of second-language learners that failed the test lack additional reading support (Brooks, & Rodela, (2018). In 2015, the National Center for Education Statistics (NCES) found that 57% of eighth grade students lacked proficiency in reading comprehension (Hemphill and Vanneman, 2011).

In addition, several pieces of evidence lead to suspicion that readiness gaps have narrowed because of more rapid gains in readiness among low-income and non-white students rather than decline or stagnation of high-income and white students’ readiness. This demonstrates that students fail state reading tests for a variety of reasons and that, if schools are to help these students, they will need to provide appropriate intervention to meet students’ varying needs. For example, placing all struggling students in phonics or word identification programs would be inappropriate for nearly 58% of the students were appropriately instructed, and had adequate or strong word identification skills (Patrick, 2020). Similarly, an interventional approach that does not address fluency during early literacy, and does not build reading stamina for longer period, or provide sufficient reading resources for students who demonstrate difficulty with fluency is likely to be ineffective in reducing problem among struggling readers (Brooks, & Rodela, (2018).
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A Nation at Risk: The Imperative for Educational Reform study indicated that approximately 70% of students enrolled in ninth-grade read below grade level, and 1.2 million of the graduating seniors leave high school with low literacy skills (Boudreaux, 2012). This report indicated that approximately 70% of students enrolled in ninth-grade read below grade level, and 1.2 million of the graduating seniors leave high school with low literacy skills. The occurrence suggests that many middle school students struggle with reading comprehension which lead to, an average of middle school students struggles with reading comprehension. The problem dates back in time. “Elementary school is the place in which these middle school students failed to excel or master specific reading skills to prepare them for the rigors of complex text, narrative and informational” (Boudreaux, 2012, p. 101). If not resolved early, students’ inability to read at grade level could hinder their academic growth for a lifetime.

Many students enrolled at elementary schools, especially children from low socioeconomic backgrounds and recent immigrants, fail to meet grade level benchmarks (Richards-Tutor, Baker, Gersten, Baker, & Smith, 2016). Snow, Burns, and Griffin argued that to achieve academic and personal success, struggling readers must understand text at a critical age (cited in Mokhtari & Reichard, 2002). Interventions that target beginning reading skills must produce a moderate-to-large effect in reading (Richards-Tutor, Baker, Gersten, Baker, & Smith, 2016). Few published studies exist that describe the effectiveness of interventions and support programs for English as a Second Language (ESL) students (Dussling, 2017). To become a successful English reader, students must develop a functional knowledge in an alphabetic writing system and apply it as they begin to read words in print. As students move from basic to complex challenges and encounter new vocabulary, they will progress to more difficult texts (Gersten &
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Geva, 2003). However, students do not always receive the attention needed to practice building their vocabulary.

According to Murphy, Wilkinson, Soter, Hennessey, and Alexander (2009), students with suboptimal reading skills have fewer opportunities to engage in high-quality discussions and spend less time in remedial classes intended for fewer readers. The Literacy Language-Minority Children and Youth study provided an analysis of research on teaching reading (August, McCardle, Shanahan, & Timothy, 2014). The panel conducted a comprehensive synthesis of the literature and attempted to answer questions about instructional effectiveness (Bunch, Walqui, & Pearson, 2014). Not all reading intervention programs are created equal. Although some get the job done and although these intervention mechanisms are not the only way to solve reading problems, some have been instrumental in helping students at-risk for reading failure. Bianco et al. (2010) reported their findings from a comparison of three programs: one targeting components of language comprehension (e.g. monitoring, inference making), another targeting language comprehension skills implicitly via storybooks reading, and a third focusing on phonological awareness. The programs which focused on explicit comprehension skills produced significant improvements in spoken language comprehension, but not in phonological skills; whereas phonological awareness training significantly improved children’s phonological skills, but not their comprehension. The panel also made recommendations that aimed to strengthen student literacy, such as teaching a set of academic vocabulary words intensively across several days using a variety of instructional activities; integrating oral and written English language instruction into content-area teaching; and providing regular, structured opportunities to develop written language skills.
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Despite the wealth of current knowledge in beginning reading instruction, many research studies show that students with reading difficulties continue to struggle even after receiving an effective intervention. In a meta-analysis of the literature, Al Otaiba and Fuchs (2002) scrutinized 23 studies and determined that students’ non-response to reading interventions ranged from 8-80%. Additionally, Wanzek, Roberts, & Al Otaiba, (2014) examined how at-risk kindergarteners respond to reading facilitated instruction with respect to student reading achievement and social behavior. As predicted, students’ responses during teacher-facilitated instruction increased significantly at the end-year reading achievement. The non-responsive readers typically demonstrated deficits in phonological processing and rapid naming ability (ibid.; see also Torgesen, Wagner, Rashotte, Rose, Lindamood, Conway, & Garvan, 1999). Additionally, there is need to examine whether adequate initial response leads to normalized reading outcomes for over time (Gilbert et al. 2013).

Identifying students who require pull-out literacy interventions is a challenge for many struggling schools. On this author’s arrival in the 2008-9 school year during the process of interviewing for the position of principal at St Augustine Catholic School in Washington, D.C., one of the concerns raised by the panel was on how to address the situation of children who were lagging behind and were not on grade level in their English language class. This author responded that the problem could be fixed, given that this is among her areas of academic competence. The caveat though would be the provision of the necessary resources to address the problem, for which the panel gave full consent for this author to hire five reading specialist coaches to provide pull-out reading intervention to the needy and newly arrived immigrant students. The result has been phenomenal: students who were two or more grade level below than their peers performed on grade level. We used a program called Response for Intervention
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(RTI), a model which provides reading comprehension interventions in tiers a model which provides reading comprehension to different “at risk” levels that monitor every child enrolled in reading intervention pull-out. Researchers and policy makers praise RTI for the opportunity it affords students with reading disabilities to receive the intensive tiers of support they need, instead of allowing them to wait to fail, which was a major criticism of the use of the IQ-achievement discrepancy model for identifying students with reading disabilities (Al Otaiba, Kim, Wanzek, Petscher, & Wagner, 2014). Although a similar intervention model was in practice in the program called Title 1, it did not adequately address the reading disability problems for various reasons that, in addition to severely limited resources, included insufficient time for intervention, and teachers being assigned only once a week in either reading or math. This author realized this was the reason the students struggled and sought to address it with an alternative model that worked because the needy students were pulled daily on 90 minutes per week.

Educators can facilitate learning by matching individual needs and providing small group instruction (Culican, 2007; Joshi, & Aaron, 2011; United States Department of Education [US DOE], 2010). Juel, Griffith, and Gough found that the gap between proficient and struggling readers widens over the elementary years and remediation of reading problems becomes increasingly challenging after third grade (Joel, Griffith & Gough, 1986; cited in Al Otaiba, & Fuchs, 2002). As students advance, text complexity, content variety, and reading independence increase (Amendum, Conradi, & Hiebert, 2018). Students who read below standard in first grade remained poor readers in fourth grade. Hence, the gap between poor readers and their more accomplished peers widens over the elementary years (Al Otaiba & Fuchs, 2002).
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Researcher Positionality and Context

The author’s role as an immigrant and an urban school administrator in the Archdiocese of Washington, DC (ADW) who strove to adjust to the U.S. educational system connects her to the ADW's pull-out intervention program. It is critical to note that the author has been involved with the District of Columbia’s Title I program, formerly known as Child First, from the very beginning of that program all the way to the present time. There is no detachment between this author and the research participants because of her role in their lives as principal at St. Augustine School. This is consistent with critical pedagogy studies where there is no separation between researchers of color and the subjects they are (Jennings & Lynn (2005)). Additionally, critical pedagogy is generally viewed as a form of education that is outer-directed and attempts to foster radical social change. Kaufman, (2017). Critical theory pedagogy critiques, and focuses on transforming our society. Because they cast doubt on claims of technological rationality, critical theory pedagogy attempts to discover why oppressive structures exist, including who holds power, and ways those powers are utilized to benefit officeholders. Equally, critical pedagogy deals with the complexity of race and identity.

The author embarked on this research project as a teacher, mentor, and administrator concerned with the plight of immigrants and struggling readers in predominantly African-American institutions, including their ability to compete with peers in the same grade in preparation for post-secondary education. Historically, struggling readers are at a greater disadvantage than their peers (Torgesen, 2006). Every year, many students in fourth and eighth grades in the United States place below the basic level in reading comprehension (Paciga, Hoffman, & Teale, 2011). Many older struggling readers are victims of poor reading instruction (Perie, Grigg, & Donahue, 2005).
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The goal of many recent intervention studies has been to examine the conditions that must be in place for all children to acquire adequate reading skills (Torgesen, 2000). Given the challenges that immigrant and low-income students face, the struggle to read proficiently is one of the most important issues in their lives, from a social, civic, spiritual, and educational standpoint. Accordingly, the question this dissertation raises is linked to the author’s enthusiasm as an educator, including assessing the effectiveness of reading interventions that transform students’ future. Students who read below grade level are disadvantaged when it comes to mastering the concepts and skills they would gain in that grade. The No Child Left Behind Act (NCLB), signed into law in 2002, signaled a new level of expectation for student performance. The law required all students in elementary and secondary schools to perform at a minimally proficient level in core academic areas by the year 2014. While then President Barack Obama waived the requirement to meet this deadline for at least 35 states, there is still the expectation that districts meet continued academic achievement (Wong, 2014; Derthick & Rotherham, 2012).

The recent reauthorization of the NCLB law received widespread bipartisan support in Congress, after a seven-year delay (Russo 2016). Additionally, as guarantees, they are subject to revision. The reality, however, is that many students continue (Korte 2015, cited in Russo (2015)), noted that the reauthorization of NCLB, under Obama called the Every Student Succeeds Act (ESSA), came into effect when President Obama signed it into law on December 10, 2015. In light of the impact ESSA is likely to have on school business officials, their boards, and other education leaders, provides an overview of the key substantive components with brief conclusive financial issues for school business officials. This law does not review the many provisions on funding, because insofar as those amounts are typically treated as goals rather than to lag behind, especially in districts with multiple external obstacles. Hunger, violence,
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homelessness, and lack of adequate adult interaction outside of the school are just a few of the issues that can interfere with student learning (Carter & Welner, 2013). And although these factors are often beyond the control of the school system, teachers are still held accountable for ensuring that all students reach high levels of academic success. These requirements led districts to be in constant search of solutions to pervasive academic inequalities among various groups of students.

The struggle with literacy affects 67% of fourth grade students, and 76% of eighth grade students who read below proficient levels (National Assessment of Educational Progress [NAEP], 2011, cited in Slavin, Cheung, Holmes, Madden, & Chamberlain, 2013). This indicates that most classroom teachers need increased access to effective, reliable instructional practices that support students’ achievements. Additionally, teachers have applied and increased this access to be more effective in instructional practices for over a decade. These practices support the growing body of research evidence (Wonder-McDowell, Reutzel & Smith, 2011). In fact, when these practices are applied diligently, student reading increases, effectively checking the rate of failure by struggling students on state and national reading assessments (Wonder-McDowell, Reutzel, & Smith, 2011). The National Center for Education Statistics NCES (2009) counters that “the proportion of students who struggle to read at below grade level, 40% have not changed appreciably from 1993 to 2009” (p. 260). Motivated teachers may help many struggling readers with fluency and comprehension (Pennington, 2009) at an early age before it becomes difficult to address (Roberts, Torgersen, Boardman & Scammacca, 2008). Individual differences in motivation to read for understanding play a role in supporting skill acquisition that is critical for older struggling readers (Guthrie & Humenick, 2004). Commenting on “students of color and the achievement gap,” Valencia (2015) provides an authoritative and systemic treatment of the
achievement gap, focusing on Black and Latino/Latina students. He observed that the continued achievement gap between low-socioeconomic students of color and their economically advantaged White counterparts is the result of a racialized reality in U.S. K-12 public education. He drew on critical race theory to examine the societal and educational factors that help to create and maintain the achievement gap.

**Scope of Study**

The current implementation level of evidence-based reading instruction is insufficient to accelerate struggling readers’ growth to catch up with their peers and maintain grade-level performance ([NCES], 2009). In addition, the number of older students in grades 4-12 diagnosed with reading disabilities is increasing; there is need to access and to develop interventions that support older struggling readers (Scammacca et al., 2016). Many students struggle to read in middle and junior high levels due to lack of comprehension skills (Edmonds, Vaughn, Wexler, Reutebuch, Cable, Tackett, & Schnakenberg, 2009). Researchers still do not understand why so many children struggle with learning to read. In some cases, mental or physical disabilities are the underlying cause. More often, reading problems are not clearly associated with disability.

Some students appear on reading intervention rosters year after year because the remediation programs of some schools are ineffective and do not address the individualized needs of many students (Oczkus, 2013). These struggling readers face challenges because their teachers are not qualified to teach them, due to insufficient mastery of the subject. Some of these students can catch up in critical reading skills if they receive additional, sustained instruction in small, focused groups (Roberts, Torgesen, Boardman, & Scammacca, 2008).
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This study sought to collect quantitative data from an existing pull-out program at selected K-8 private schools in Washington, DC and gauge the program’s effectiveness in improving literacy. To this end, this study summarized and then analyzed the standardized test scores of students who participated in the program. Participating teachers engaged in a series of sessions to acquire and practice reading intervention strategies. They collectively evaluated and measured results from students’ beginning of the year (BOY), middle of the year (MOY), and the end of the year (EOY) assessments using the Scantron Performance Series (SPS) model. The data allowed the researchers to investigate how participation in the program impacted student learning.

Purpose of the Study

This dissertation measured the effectiveness of a pull-out program with students in kindergarten through eighth grade at three Title I parochial schools in Washington, DC, using a quantitative approach. The faculty, the Catholic Archdiocese of Washington (ADW), and the District of Columbia Public School System (DCPS) currently conduct annual state assessments. Students in every grade completed Scantron Performance Series (SPS) assessments within the past school year. The data showed that although many students at both Catholic and public schools made gains, some were still at risk of failure because they performed below average on the state requirements (National Catholic Education Association, NCEA, 2016; NCEA, 2017). These schools also received a growth rating of below average on the state report card (McDonald & Schultz, 2018). For the purposes of this study, “reading literacy” was based on the existing government Title I program tailored after the No Child Left Behind Act (NCLB, 2001). The dissertation examined the pull-out program's impact on students' reading comprehension and decoding levels as measured by Scantron Performance Series assessment results. The results
from Scantron Performance scores were analyzed to examine students’ scholarship on reading comprehension and target intervention programs to reduce struggling reading at the elementary level. Determining the effects of pull-out programs on immigrant students and students from low socioeconomic backgrounds is challenging because preparing teachers to educate minority students require participating teachers who develop knowledge in first- and second-language acquisition (Vang 2005). Also, the histories of two specific cultural groups such as the African American, and the immigrants have the ability to adapt to suitable curriculum for their diverse background. As one study perceptively points out, “A large number of bilingual students fall into the at-risk category because their cultural and linguistic backgrounds put them at a disadvantage in the American educational system and place them in a position in which school, second-language learning, academic achievement, and cross-cultural adjustment could be difficult” (Vang 2005, p.9).

This study is essential for those interested in creating change for immigrants and students from low socioeconomic backgrounds in DC and similarly-situated environments. Struggling readers face many social and institutional biases, and intervention is necessary for them to reach an appropriate reading level. This dissertation has the potential to contribute to the field of literacy education for several reasons. First, there are few studies on the relationship between reading pull-out programs, Lexile levels, and decoding fluency. Most pull-out programs focus on reading comprehension, rather than on decoding (Hudson, Pullen, Lane, & Torgesen, 2008). Second, related to the first point, many reading programs neglect decoding. Many early elementary students fail to reach functional levels of literacy (Ehri, Nunes, Stahl, & Willows, 2001; Georgiou, Parrila, & Papadopoulos, 2008; Bowyer-Crane, et al., 2008). As a result, many researchers limit their energies to investigating early intervention programs designed to foster
decoding skills, such as phonological awareness, letter and word identification (Hudson, Pullen, Lane, & Torgesen, 2008). Some educators feel that comprehension is more important since many students struggle with this skill (Aarnoutse, Van Leeuwe, Voeten, & Oud, 2001). However, comprehension and decoding are interdependent. Talcott, Witton, McLean, Hansen, Rees, Green, and Stein (2000) explained that in alphabetic languages, such as English, letters correspond with phonemes, the smallest meaningful units of sound that amalgamate to constitute spoken words. However, the relationship between letters and phonemes differs in other languages. Phoneme identity in English depends more on letter context than languages with more regular letter-phoneme relationships.

The most critical step toward the identification of printed words is the alphabetic principle, meaning the ability to represent a letter or a combination of letters by their phonemes. (Pullen & Justice, 2003; Stanovich, 2009). Decoding is gaining new recognition as an essential element of every reading program, particularly for students who struggle to read (Moore-Brown, Montgomery, Bielinski, & Shubin, 2005). Reading comprehension requires understanding words, sentences, and texts. In other words, students must understand the writer at lexical, syntactic, semantic, and pragmatic levels. Children with comprehension difficulties often have poor verbal skills and it is essential to consider how this struggle impacts their reading development (Nation & Snowling, 1998). Finally, current research has established a relationship between the decoding and comprehension processes. Until recently, reading assessment and research has focused on decoding skills (Keenan, Betjemann, & Olson, 2008). However, reading abilities are automatic actions that result in decoding and comprehension with speed, efficiency, and fluency and usually occur without awareness of the components or control involved (Afflerbach, Pearson, & Paris, 2008).
Goff, Pratt, and Ong (2005) perceive the relative contribution of oral language skills in reading comprehension as contradictory. While some studies suggest that oral language skills are not central to early reading comprehension, they become fully operative only when the child has acquired decoding skills. In contrast, others, such as Melby-Lervåg and Lervåg (2011) have argued that at least some component of reading comprehension is interdependent and mutually facilitative with decoding. If a struggling reader has difficulty in processing single coded words, they may lack the ability to predict what they will encounter on the printed page (Hudson, Pullen, Lane, & Torgesen, 2008).

Further, Lipka and Siegel (2010) found that identifying and intervening with poor readers early is critical. They examined factors affecting reading skills development in children for whom English is a first (L1) or second language (ESL). Their Response to Intervention (RTI) model stressed early identification struggling students, specific and individualized intervention, and frequent monitoring as a basis for success (Lipka & Siegel, 2010). Their study employed an RTI model focused on all struggling readers in the target K-8 schools. Students were identified early with three-tiered reading tests. Students with a low score on any of the assessments received regular intervention and assessment (Lipka & Siegel 2010). The study found that the number of children with reading difficulties decreased significantly with the RTI approach. Lipka and Siegel (2010) concluded that the three-tiered intervention increased the likelihood of student's success while decreasing the need for the additional intervention support.

Galloway and Lesaux, (2014) stated that teachers of struggling readers must be agents of change. This strong desire led to teachers seeking for patterns in students' data, within and across groups. Teachers' efforts enlighten society on struggling readers' performance and guide improvement efforts to reduce the overall numbers of suboptimal readers. There is a growing
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body of research that has deepened teachers' understanding of reading and its instruction, with implications for system-wide reform. There is no single fix for struggling readers, but many intervention programs are useful. Roberts, Rane, Fall, Denton, Fletcher, and Vaughn (2015) argued that by participating in an intervention program which focuses on building comprehension strategies and raising reading levels, many students learn strategies that make them more successful. They elaborated that such success has the potential to create social change. Ultimately, providing these students with skills and interventions may, in turn, create school-wide social change and decrease the number of students in intervention classes. Social change can begin by ensuring that struggling readers are served in some capacity.

For this reason, it is critical to evaluate these programs' effectiveness (Knutson, 2006). Reading fluency is a primary element in the reading process (Jasmine & Schiesl, 2009). The ability to read orally with speed and efficiency, acquire word recognition, decode words, and comprehend text is vital in early literacy (Pikulski & Chard, 2005). Despite the increased frequency of pull-out programs, some students are unable to keep pace with their grade-level peers. Educators, especially those in schools with high levels of poverty, face many challenges in supporting students' literacy needs (Lesaux, 2012). Although many young children master reading skills in early grades of elementary school, others struggle as they move through middle and high school (Lesaux, 2012). If students are proficient readers before they approach middle and higher elementary school, the distinction between the procedural skills will be evident because reading is dynamic and multifaceted process for readers continued development. Readers must master reading proficiency, conceptual skills, and knowledge in early literacy. Interventions should enable children to self-actualize (i.e., achieve success in early reading measures) through individualized pull-out sessions, more difficult, if not impossible, otherwise.
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Struggling readers are not able to handle added language and knowledge demands of the text in middle and high school because most schools do not provide the right teaching procedures of reading skills that are suitable for students. Also, if reading instruction is not structured to promote knowledge-based reading development, that instruction typically stops in middle grades. In a sense, some schools may not have assessment practices that identify reading difficulty for both younger and older students. This unintended outcome reflects on some program instruction shifts creating more workload for teachers and other instructional providers, while aligning academic language, reading strategies, concepts, and skills between and among various reading instruction programs (Wonder-McDowell, Reutzel, & Smith, 2011).

Definition of Terms

The following terms are operationally defined within the study.

Pullout Interventions

A pull-out intervention from the beginning was popularly known as Chapter 1. Contemporarily, it shifted to what we now call “Child First” which has a guiding principle of compensatory education. It is Compensatory because it supplements learning for “at-risk” students. Pull-out intervention in a broad sense is compensatory but not supplant. Most, low achieving schools which are eligible for government Title 1 services receive something “extra”. In most cases, states allocate funding to manage such programs. Additionally, schools have overwhelmingly relied on pull-out services to serve their socially “At-risk” students. Title 1 services are in effect supplementing rather than supplanting regular education program. In 1982-83, the pullout programs were properly known as Chapter 1. Students who qualify for Chapter 1 are taken out of regular classroom for about 30-40 minutes of remedial instructions in reading /or mathematics. This model provides students ono-on-one instructional time with the teacher. The
supplement for low achieving students added additional time to educate to close the gap on the grade mastery. This arrangement has the advantage of making material available that was covered for the students who were identified to participate in the program.

**At-Risk Reading Student**

Children who display poor reading skills during their first years of formal reading instruction run a high risk of remaining poor readers (Chard & Kameenui, 2000; Torppa et al., 2015). Early identification of students at risk of reading difficulties involves identifying students before they actually develop a problem with reading and even before they have received any formal reading instruction at school. At-risk and struggling readers will be used interchangeably throughout this research (Torgesen, 2006).

**Lexile**

In this study, lexile was used to mean a piece of information about either an individual student’s reading ability or the complexity of text (The Lexile Framework, 2010). A Lexile reader measure represents a person’s reading ability on the Lexile scale. A Lexile text measure represents a text’s difficulty level on the same Lexile scale. When used together, they can help a reader choose a book or other reading material that is at an appropriate level of challenge. The Lexile reader measure can also be used to monitor a reader’s growth in reading ability over time (Smith, Turner, Sanford-Moore, & Koons, 2016).

**Oral Reading Fluency Skill**

Oral reading fluency skill is considered to be the bridge to reading comprehension. It is a prerequisite for comprehension, however, it has been neglected in many English reading programs despite the fact that different theorist have shed light on this skill. (Morrison, &
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Wilcox, 2020). The impact of fluency struggles extends beyond word-level difficulties to include deficits in reading comprehension. (Hudson, Koh, Moore, & Binks-Cantrell, 2020).

**Reading Intervention**

Reading intervention refer to services that at-risk readers receive in weak or deficit areas in order to become on-average level readers (Cooper, 2007b). The Elementary and Secondary Education Act, ESSA, provides financial assistance to local and educational agencies (LEAs) and schools with high numbers or high percentages of children from low-income families to help ensure that all children meet challenging state academic standards. (Funds are allocated through statutory formulas that are based primarily on census poverty estimates and the cost of education in each state. Once a State’s Education Finance Incentive Grant (EFIG) is allocated, funds are determined and provided. A Local Educational Agency’s Title I allocation is the sum of the amount that the Local Educational Agency receives under each formula. LEAs also must use Title I funds to provide Title I services to eligible children enrolled in private schools)

**Social Justice Implications and Researcher’s Societal View**

Social justice concerns about education affects every child, regardless of their gender identity, sex, sexual orientation, religion, race, ethnicity, socioeconomic status, immigration status, or disability status. Every child deserves a good education that provides supportive, appropriate interventions. All students should receive effective, quality instruction to develop a solid foundation on which to build the critical literacy skills required for success in school and life. Unfortunately, many students in lower socioeconomic school districts receive neither quality instruction nor supportive interventions, resulting in substantial inequalities in comparison to wealthier school districts. Additionally, Schwartz (2001) observed that to date, school efforts to close the gap in academic achievement between ethnic and racial minority students and white
students have been unsuccessful. Instead, the gaps in educational performance persist at multiple levels, with the greatest gaps between students of color and immigrants and their white peers. One of the most critical ways to close the gap is through a new reading intervention that works (Schwartz, 2001).

Everson and Bussey (2013), assert that school leaders are insensitive to equity and lack fairness in their day-day work, because of they still live in moral imperatives embedded in their jobs. One example of such persistent educational problem is the relationship between schooling and students 'economic status. The immigrant youngsters continue to lag behind other student performance. In this author’s assessment, this is a social justice issue that conscientious leaders must address. In essence, educational institutions have the responsibility to prepare leaders to be stewards of social justice in their schools and communities. Cambron-McCabe and McCarthy (2005) observed that when policy makers talk about social justice problems in their states, they use the gaps to advocate for academic standards and stringent assessment strategies, instead of targeting the achievement gap between Caucasian students and students of color. This discourse of accountability, standards, and quality is politically safe, but eschews more controversial, yet foundational, discussions on race, class, gender, sexual orientation, and systemic inequity (Cambron-McCabe & McCarthy, 2005). This policy environment restrains school leaders who desire to transform schools but find themselves restricted by rules, regulations, and state controls.

In a social justice context, school leaders are called upon to adopt a transformative role as critical, public intellectuals. In other words, it is there duty to critically analyze the conditions that perpetuate historical inequity in schools, and work to change in institutional structures and culture (Cambron-McCabe & McCarthy, 2005). Marshall and Ward (2004) defined social justice leadership as the assumption of an activist role for school and social change and the
identification of institutional and societal inequities, and iniquities driven by race, gender, sexual orientation, and disability. A child from a low socioeconomic background attending a high-poverty school in a low-income community is more susceptible to experience reading difficulties than a child attending and living in a higher income school and community (Goldenberg, 2001).

Literacy enables individual learners’ power and sense of agency as they learn about the world through words in print and multimodal communication (Freire, 2000). These social justice views contextualize literacy development in various sociocultural contexts and promise more equitable learning for diverse groups of students. Equity is relevant to literacy instruction because when stakeholders disregard students' sociocultural context, marginalized learners become more marginalized because their home literacy practices are different from what is considered normative. Program for International Student Assessment (PISA) survey data show a relationship between school achievement and their students' socioeconomic backgrounds, especially in elementary school (Carnoy, Khavenson, Loyalka, Schmidt, & Zakharov, 2016; Organization for Economic Co-operation and Development (OECD)). Failure to learn to read at an adequate level is more common among poor, non-white and English language learning (ELL) children (Lesaux, 2012; Snow et al., 1998, as cited in Gettinger & Stroiber, 2008). Further, the large scale of cross-sectional data set was used and recommended to hire more effective teachers that are efficient and equitable. The distribution of educational resources in early childhood education emphasizes formal mathematics, and greater decentralization of school management (Loveless, 2014; OECD, 2010, 2011, 2013c; Schleicher, 2014; Woessmann, Luedemann, Schuetz, & West, 2009)

Literacy struggles in U.S. schools challenge educators because disparities, hard to minimize, exist between children from disadvantaged backgrounds and those from more
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privileged homes (Murnane, Sawhill, & Snow, 2012). Darling-Hammond (2006) argued that inequalities in education resources contribute to an ever-widening achievement gap:

Of all the ways in which urban school children are being left behind, their experiences in large, factory-model high schools are the most egregious. In fact, in many such schools, young people are not only left behind but actively thrown overboard. In urban areas, dropout rates from large comprehensive high schools are typically 50% or more. These schools are structured as huge warehouses, often housing 3,000 or more students in an organization focused more on the control of behavior than the development of community (p. 1).

Academics have conducted intense research on high school reform and inequality between low- and high-performing urban schools (Darling-Hammond, 2004). Many high-performing schools also offer a range of supplementary services, such as homework support, and tutoring. They also use unique education models that push-in additional teachers to the core classroom to support students, as opposed to pull-out classroom models which occupy students with workbooks and remedial tasks. These strategies differ from a traditional teacher who differentiates learning to meet every child's need.

Reason for Evaluating Pull-Out Programs

For the foregoing reasons, the purpose of this research study was to investigate the effectiveness of a reading intervention pull-out program with the I Inspire Learning curriculum on student reading comprehension levels, as measured by the curriculum's assessment. It is critical to determine if this program has an impact on students' academic success by improving their ability to decode. The District and Archdiocese of Washington, (ADW) School data profiles show that data gathered through weekly assessments, homework, and end of chapter tests, have not improved, indicating a lack of fluency, decoding, and comprehension skills in the classroom. About 20% of struggling readers are “read-to” from kindergarten until eighth grade, meaning that teachers read them the test questions. The ADW has allowed schools to develop a Catholic
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Schools’ Academic Plan (CAP) as a guideline to protect teachers from falling into academic delinquency. The scores on student literacy assessments for kindergarten through eighth grade and strategies for older students (Ecalle, Kleinsz, & Magnan, 2013) are forms of computer-assisted instruction (CAI) designed to supplement classroom instruction.

Theoretical Framework

This study is grounded on critical pedagogy theory modeled after Freire (1994; 1999) and on critical race theory. *Pedagogy of the Oppressed* is a transformational Freirean model that changed the face of schools (Freire, 2018). There Freire argued that schools should look more like the students and community it serves rather than a business (McLaren, 2000). Evidence-based, small-group instruction for English Language Learners is also grounded in critical pedagogy theory (Kamps et al. 2007). The interventions in reading program include phonemic awareness of oral blending, stretching, and sound discrimination; letter sounds; alphabetic decoding; reading tricky words, text, step-by-step stories, and phonics mini-books to build fluency; comprehension activities, including sequencing, retelling, and story grammar; and writing of sounds, words, and sentences. Additionally, the lesson plans for reading mastery is in a pull-out format. The teachers' guidance materials indicate lessons in which students work independently or with teacher support (Kamps et al., 2007). The lessons begin with strong teacher support, and as the program advances, students’ work toward independence. Unlike other literacy instruction models, critical pedagogy is a way of “doing” learning and teaching (Akbari, 2008).

Critical pedagogy deals with social justice and change through education. By viewing education as intrinsically political and power-related, critical pedagogy exposes discriminatory
approaches and models steps toward social change in a way that makes a difference in schools and society. Teachers can incorporate themes from students’ daily lives to assist them in comprehending their situation and exploring for change. The pull-out program also addresses self-actualization for struggling readers (Akbari, 2008). The Soar to Success program examined in this study is grounded in critical pedagogy. The program helps struggling readers through an intensive, research-based reading intervention program that involves literature, comprehension strategies, and graphic organizers to accelerate growth (Cooper, 2007). As students begin the lesson, the teacher provides instruction and experience (Cooper, Boschken, McWilliams, & Pistochni, 2001). As students learn and develop skills, their learning becomes more independent (Cooper et al., 2001).

The National Academy of Education Panel (NAEP) reports that 66% of students in both the fourth and eighth grades lack proficiency in reading. Among fourth graders, 31% read below the basic level; and 24% of eighth graders read below basic level as well (NAEP Nations Report Card, 2015, as cited in Bandeira de Mello, Bohrnstedt, Blankenship, & Sherman, 2015 and in Reardon, Valentino, & Shores, 2012). Students in grades 4-12 manifest a range of reading difficulties, from students who read below grade level to those who are above grade level (Bandeira de Mello, Bohrnstedt, Blankenship, & Sherman, 2015). Nieto (2001) advised that literacy instructors should explore connection between language and culture; examine the sociocultural and sociopolitical context of language and culture and determine their effects on students learning achievement; analyze the implications of linguistic and cultural diversity for school reform; and reflect critically on their classroom practices and how they relate to linguistic and cultural diversity in light of the material it presents.
Critical pedagogy theory’s primary focus is to enlighten students, create social status awareness, and improve lives through education and action. It is a theory that can change the mind of the learner and make a positive difference in the society in which the learner lives. Like Dewey, Freire believed that the educational experience can be alienating depending upon the philosophical model upon which it is based. Critical theory is a synthesis of pedagogical models applied to the context of international learning experiences, which has the potential to support transformative learning that makes a difference in how students think and engage with complex global issues (Rennick, 2015). Critical pedagogy is a philosophy that guides the educational process and environment. Although Freire’s theory is based on a Latin American context, it is a universal concept.

Freire’s approach to pedagogy continues to be essential to the construction of a fair and democratic global society (Gadotti, 2017). “The world is not finished; it is always in the process of becoming” (Patton, 2017, p. 5) in harmony between formal and non-formal education. Schools are not the only educational spaces and education is inherently political. All education is a societal project. According to Gadotti (2017), education is a practice of freedom and the precondition for democratic life: “Ethics as a central reference in pursuit of the radicalization of democracy” (p. 21).

Critical race theory provides another lens through which data were analyzed and interpreted in this study. Critical race theorists attempt to expose racism and injustice in all its forms and facets. This attempt examines the implicit and explicit implications of a system’s policy relating to racism. Emphasis and value are placed on knowledge construction, on naming one’s own reality, and on the multiple and varied voices and vantage points of people of color. Communities of color are empowered to tell stories often much different from the ones that have
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been portrayed in the past (Milner IV, 2007, citing Chapman, 2007). According to Munin, (2013), “in an equitable society, if Whites constitute 65% of the total population, they should also make up 65% of those in the low-income bracket”. In reality, this group constitutes 23.6 percent points lower in representation in the low-income family category. At another lens, Blacks make up a larger percentage than their overall size in low-income population by 9.8 percent point. It is true that this is same for Hispanics, who constitute a greater share of the low-income group compared to their population size by 14-6 percent point, (pp.4-5). Therefore, studies should be careful about underrepresenting students of low-socioeconomic status. There is need to “carefully examine, beyond descriptive statistics, the causes, relationships, and reasons so many more children and students live in poverty” (Munin, 2013,p.3).

Furthermore, critical race theory was adopted because many factors inside of school constitute hindrances for students living in poverty. Therefore, educators should pay attention to instructional practices that are responsive to the complex needs of students (Gay, 2010; Howard, 2010; Landson-Billings, 2009; Moll and Gonzalez, 2004; Nieto, 2000). School leaders need to pay attention to students of low-socio-economic status because there are systemic hindrances to their educational progress and achievement. Education should highlight instructional practices and learning opportunities that converge in a way that helps students understand what poverty is, why it exist, and perhaps most important, bow people can speak out against and transcend it.

Significance and Context of this Study

During the past decade, US elementary schools experienced a 32% increase in ESL students Collier, (1995). ESL students now represent 9% of the total student population (US DOE, n.d.). Due to ESL population growth, schools face new challenges in implementing effective reading interventions (Zentall & Lee, 2012). Educators need to determine what
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constitutes effective reading instruction for struggling readers, including immigrant children with disabilities and students from diverse socioeconomic backgrounds. More than 55% of adults lack proficiency in reading, which demonstrates the great societal need to improve reading abilities at the elementary level (Mellard, Patterson, & Prewett, 2007). Children who read early and well tend to sustain academic success and gain more print exposure. Early proficient readers succeed in other academic subjects if their reading foundation is well grounded (Lonigan, Burgess, & Anthony, 2000). Interventions can improve literacy skills. Nevo, Brande, and Shaul (2016) conducted a meta-analysis of interventions for struggling readers and students with disabilities ages 6-12 and found that explicit instruction in reading comprehension is beneficial to students with reading disabilities who consistently apply the strategies (Allor, Champlin, Gifford, & Mathes, 2010; Cabel et al., 2010, as cited in Adlof, McLeod, & Leftwich, 2014; Lennox, 2013) asserted that effective academic instruction reduces the risk of children with disabilities becoming less proficient while increasing their lifetime academic success if explicit instruction is not included in early instruction.

This dissertation addresses several critical areas of reading literacy, such as decoding, fluency, vocabulary, and reading comprehension for K-8 immigrant and low-income students enrolled in two ADW elementary schools. Education scholars have identified strategies to assist students who struggle with reading (Fuchs & Fuchs, 2006; Hale, Kaufman, Kavale, & Naglieri, 2006), and they have demonstrated the magnitude of students who struggle with reading comprehension of grade level materials (Hiebert, 2006). However, if students' inability to read at grade level is not fully addressed, this concern could fester into a reading crisis at colleges (Brothen, & Wambach, 2004). This study will measure the effects of reading intervention and examine if it advances student self-actualization. This study's size is 210 K-8 students from the
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participating schools who read at grade level when compared with struggling readers.

Comparison between students’ test score performances from BOY, MOY, and EOY assessments.

The selected students at one school were taught using IXL materials. The selected students at the other school received instruction via Title I Stride Academy. The time in each class was used to teach reading strategies and assist the students with achieving grade level reading standards.

Previous Intervention Efforts

During the past decade, educators have implemented numerous initiatives and interventions at District and ADW schools in an attempt to improve students' reading achievement. In 2009, for example, a Catholic school hired four reading specialist teachers to provide pull-out interventions for struggling readers in kindergarten through eighth grade to bring them up to grade level.

School-wide intervention.

In 2010-2015, the ADW's education department offered a resource called “Success Maker.” This is a computer adaptive program intended to help students reading below grade-level, including immigrant students, to close the academic achievement gap. The effort was successful because about 10% of the students who were one grade behind began to read on grade level. In 2016-2018, the ADW purchased another computer adaptive program that was more aligned to Common Core and ADW standards was purchased and geared towards closing the students' reading test gap.

Teachers’ professional development efforts.

There were several professional development efforts conducted prior to this study: Reading First (2010); Reading Specialist (2009); Study Island (2015); and McTighe & Wiggins' (2012) Understanding by Design; Dahlgren, Malas, Faulk, and Lattimer's (2008) A Time to
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Diocesan Efforts.

In 2013, the ADW’s curriculum and planning department established two yearly teacher collaboration days to form an inter-school literacy leadership team. This team was comprised of various stakeholders, representing each technical area from kindergarten through grade two, grades three through five, grades six through eight, and grades nine through twelve. The team also formed subcommittees of stakeholders for each of these areas, including teachers, principals, literacy coaches, administrators, superintendents, associate superintendents, ADW curriculum and planning representatives, literacy vendors, and the Catholic Schools Office (CSO) Secretary of Education. Funding from DCPS' Title I grant was part of the funds used to plan to this literacy training.

Social Justice Implications in DC Context.

In addition to supporting teachers’ professional learning, a major ADW goal has been to align curriculum with the District, using the Common Core Standards Aligned System Framework developed by the Office of the State Superintendent of Education (OSSE) (as cited in Brown, Boser, Sargrad, & Marchitello, 2016) which was signed into law by President Barack Obama’s Race to the Top in 2015. Under NCLB, all school districts and schools must make
adequate progress each year in raising student’s achievement, culminating in 100% of students reaching proficiency by 2014.

The Elementary and Secondary Education Act (ESEA), and former Secretary of Education Arne Duncan’s decision to consider waivers of key NCLB requirements identified Noyes, a public school in the District of Columbia, for meeting the year’s annual yearly progress (AYP) academic goal. The purpose of the plan was to provide flexibility through waivers that constituted growing concerns in the increasing number of schools that were failing to make AYP and that most would fail short of the 2014 goal (Usher, 2012). In 2006, only 10% of students in Noyes School scored “proficient” in math on the standardized test required by NCLB. Two years later, 58% achieved that level of proficiency. The school showed similar gains in reading with a clear record to account for the gains (Gillum & Bello, 2011). More recently, there has been continued work to realign the curriculum to Common Core Standards, including the ADW’s private schools. Although the US Department of Education named Noyes a National Blue Ribbon School in 2009, a closer look at Noyes raises questions about its test scores from 2006 to 2010. Its proficiency rates rose much faster than the average DC school.

In 2010, when scores dipped for most of the District’s elementary schools, the proficiency rates of Noyes fell further than average (Gillum & Bello, 2011). The District was forced to examine testing irregularities because the system became a national symbol of what high expectations and effective teaching could accomplish. In 2017, DC won more than $75 million in federal grants for public and charter schools because of the Race to the Top competition. Test scores were a factor. Decent academic distributions were far-fetched for all students, leaving private institutions, especially those serving low-income students such as those featured in this research, to remain underserved.
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Research Questions

This study used a quantitative approach to investigate how pull-out programs impact teachers and students at ADW schools by analyzing test scores to determine the programs’ effectiveness. The null hypothesis for this question was that the intervention program did not significantly improve struggling readers’ comprehension. The alternative hypothesis was that the intervention significantly improved struggling readers’ comprehension. The second research question considered the impact of the students’ overall literacy after completing the pull-out program. The null hypothesis was the program did not have an impact; the alternative hypothesis proposed the program had significant impact. This dissertation adopted a quantitative approach to access and to question the effectiveness of the pull-out reading intervention for students who struggle with literacy. It raised the following research questions and tested these hypotheses to answer the research questions on pull-out effectiveness on struggling readers.

Research Question 1: What is the effect of intervention programs on struggling readers’ comprehension scores?

Research Question 2: What is the impact of the pull-out program on the overall literacy of struggling readers?

Null Hypothesis 1: The intervention program does not have an impact on struggling readers’ comprehension scores

Alternative Hypothesis 1: The intervention program does have an impact on struggling readers’ comprehension scores

Null hypothesis 2: The pull-out program does not have a significant impact on the overall literacy of struggling readers

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Alternative Hypothesis 2: The pull-out program has a significant impact on the overall literacy of struggling readers

Summary

The purpose of this study was to develop and articulate an action plan for attainable instructional strategies that promote learning for struggling readers from immigrant and low socioeconomic backgrounds. The foregoing chapter examined the context of this study and its theoretical framework. It raised the research questions and generated hypotheses which were tested to answer the research questions on the effectiveness of the pull-out interventions on struggling readers.

The study employed Freire’s *Pedagogy of the Oppressed* and critical race theory (1977, 1987, as cited by Jennings & Lynn, 2005) to examine how students who traditionally have no voice can learn in environments that are fair (Milner IV, 2007). This theoretical framework allows students to adapt and advance in their academic careers, while simultaneously preparing them socially and culturally for entrance into elementary and middle school. Specifically, this study focuses on reading comprehension, language acquisition, quality instructional services, and the use of Title I funds in schools.

The stakeholders involved in this study included educators, parents, community members, immigrant students, and students from challenging socioeconomic backgrounds. Crosnoe (2013) states that the current national data on refugees, documented and undocumented immigrants, and immigrants leaving the United States have gaps related to origin, immigration status, and the duration of residence in the United States. This study was undertaken to act as a model for teachers who struggle to understand the diversity of the immigrant populations they instruct. It aimed to raise public awareness and provoke society to learn how to address the
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reading needs of immigrant students upon arrival, and admission into the United States schools.

In addition, this dissertation proposed that teacher training should include professional
development in cultural diversity designed to help educators better understand at-risk students
from a variety of cultures. The study, it is expected, will function as a tool for professional
development and instructional enhancement across schools especially in the Washington, DC area.
Reading comprehension skills and positive classroom environments have a significant positive impact on students who come from low socioeconomic or immigrant backgrounds, live in urban areas, or read below grade level (Crosnoe, 2013). Many children struggle to read, and such difficulties can persist into adulthood (Brooks-Yip & Koonce, 2010). To address this problem, researchers have investigated the processes that underlie reading. The aim of this study is to conduct a thorough review of current practices at the two target schools and examine the body of research that focused on demographic groups who are more likely to struggle with poor reading achievement. This literature review contains analysis of structural and social issues struggling readers face; individual obstacles for struggling readers; limitations of literacy; critical pedagogy; critical race theory; successful interventions; successful general practices; and assessment practices.

Structural and Social Justice Issues for Struggling Readers

Resource marginalization.

Students who are from low socioeconomic or immigrant backgrounds the schools included in this study have limited resources which hinder their ability to sufficiently compete with their peers from affluent schools in the District. Nationally, students who fall in this category typically underperform, resulting in failing achievement tests and grades, low graduation rates, and minimal college enrollment (Watkinson & Hersi, 2014). Watkinson and Hersi suggested that a revised pull-out program for underserved students, such as immigrants, would strengthen family and community networks, belief in education, and optimism about the future (2014).
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Poor Title I program performance.

At the schools included in this study, students who perform below grade-level receive pull-out services through a DCPS-funded Title I program. Educators monitor and analyze each student’s standardized reading assessments three times per year so that they may receive the appropriate intervention. At the end of the year, if students score at or above the proficiency level, they exit out of the program, regardless of their score in relation to the state average or their ability to complete reading assignments at their grade level. In general, the test scores of students who participate in the current Title I pull-out program have not improved. This indicates that the program should undergo evaluation and revision.

An amended program would enable school faculty to assess students’ reading progress in an inclusive classroom; effectively monitor teacher instruction; implement research-based interventions; and integrate additional assessments to analyze specific reading behaviors. According to Spear-Swerling (2015), educators at high-performing schools use assessments to accurately ascertain struggling readers’ patterns of difficulty. A careful analysis of reading instruction should reveal whether students are engaged in differentiated, rigorous, hands-on instruction that increases reading comprehension and fluency.

English language learning.

Twenty percent of students over the age of five speak a language other than English at home (US DOE & National Institute of Child Health and Human Development, NICHD, 2003). ESL students in the US speak more than 400 languages and bilingual students will soon outnumber the English-only student population (Artiles & Ortiz, 2002). Forty percent of students at a typical U.S. school will speak more than one language by 2030. This population represents
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about 43% of struggling readers (Artiles, Barletta, & Klingner, 2006). School districts struggle to address the instructional needs of immigrant students and other at-risk populations.

Immigrants and children facing economic challenges experience major obstacles in reading comprehension. According to Brooks-Yip and Koonce (2010), many struggling elementary aged readers do not receive intervention because their schools lack a reading specialist and sufficient funding. Evidence also indicates that secondary students struggle with reading even when they complete ninth grade. In fact, the 2005 Review Act revealed that 49% of secondary students were unprepared for college (Davis, & Palmer, 2010). Reardon, Valentino, and Shores (2012) found similar patterns of reading literacy among US students and their international peers. The observations were drawn based on large national and international assessments to describe the development of different types of literacy skills and knowledge as children age; the trends in literacy skills over the past four decades; the variation in literacy skills and trends among subgroups of students; and the relative positions of U.S.

One challenge is differentiated instruction. Differentiated instruction accommodates varying comprehension and reading levels among students from all socioeconomic backgrounds, especially at-risk students. However, many schools have trouble providing students with differentiated programming because it requires specialization to meet the individual learning needs of each student (Tobin & Tippett, 2014). When instruction is differentiated, teachers guide mixed ability groupings and use multiple ways to achieve the same result, but most educators are not skilled in adapting to this method of instruction (Scharlach, 2008). By differentiating classroom instruction and working in groups, struggling readers can receive more individualized attention to progress in their reading processes.
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Calderón, Slavin, & Sánchez, (2011) stated that deficiency in English language acquisition may not be the central reason immigrant children struggle to read. For example, ESL students are more likely to come from low-income families, which may be a contributing factor in their struggle to read. Samson and Lesaux (2015) contended that to understand the achievement gap between ESL and English-proficient students, one must consider additional social and economic characteristics.

**Teacher bias**

Historically, teachers viewed struggling readers as low achievers. They saw these individuals as lacking cognitive competencies, including reading comprehension, study skills, word recognition, and reading fluency. However, some teachers believe that the main issue these students face is disengagement from literacy (Moje, Young, Readence, & Moore, 2000). Struggling readers tend to be notably motivated. They are especially likely to have low confidence in reading, a concept known as self-efficacy in research literature (Guthrie & Davis, 2003). These students often lack confidence in their ability to read or improve their reading skills. Middle school educators face many challenges as they help students transition from elementary grades to new, often larger schools with different teachers, more schoolwork, more emphasis on grades, and for some students, more of the same problems that plagued them earlier. The difference between strong readers and poor ones is that when strong readers struggle with text, they employ a number of strategies that allow them to master that difficulty (Margolis & McCabe, 2006). This not true for struggling readers. They may need to learn strategies to help them make sense of text.

Classroom teachers of ELLs must implement instructional strategies that support language and literacy development, because their students are from different language groups,
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and cultures. Therefore, eliminating teacher bias toward struggling immigrant students and students from lower socioeconomic backgrounds is essential. The education of students from other cultures and academic backgrounds requires planning and collaboration between content areas. Students from low-income immigrant families who cannot meet NAEP’s proficient level in reading today are all too likely to become our nation’s lowest-income earning citizens tomorrow. Without a dramatic reversal of the status quo, we are cementing educational failure and poverty into the next generation. ESL instruction requires more attention and teacher-based strategies with greater teacher personal self-efficacy than did those who sought elsewhere for teaching literacy (García & Tyler, 2010).

Garrett (2012) stated that “teachers are largely responsible for labeling children into these categories” (p. 6). Consequently, academic expectations of students labeled as “poor readers” are often quite low. Students whose reading comprehension does not appear to coincide with the so-called “intelligent” students in the classroom are often “marginalized” through “school literacies” (White, 2009). Due to marginalization and bias, school environment is determining factor for students’ academic success. Teachers should mirror school and home expectations by setting high academic expectations that declare which literacy knowledge and skills are valued for successes.

It is common to rank children as struggling readers without looking closely how home and teachers relate to the determining factors. Teachers advocate between school and home. Today’s schools prevent home literacies as students are entering the classroom. Children whose home and family literacies differ from their school’s white, middle class practices are often viewed as deficient by institutions (White, 2009). Homes whose children are often labeled as “struggling reader” in school often find their experiences trivialized and their voices not heard.
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when they try to engage in equitable conversations with educators. Students are most successful when the classroom environment closely reflects their home lives (Potenza-Radis & Padak, 2010).

One consequence of teacher labeling and bias is the overrepresentation of minority students in special education. Linn, Lira, and Larke, (2013) revealed that 60-80% of students in special education are students of color. This is not new. Scholars refer to this trend as “disproportionate representation,” which is defined as “unequal proportions of culturally diverse students in special education programs” (Artiles & Trent, 2000, p. 70). Artiles, Harry, Reschly, and Chinn (2002) reported that in California, African-Americans were three times as likely and Mexican-Americans were four times as likely as white students to be labeled as students possessing differing abilities. Laws designed to protect the rights of learners from culturally and linguistically diverse backgrounds have failed to resolve this problem (Artiles & Ortiz, 2002). Teachers regard these students as “Educable Mentally Retarded” (EMR). Although only the student population in general education was 70% white, 12% African-American, and 13% Latino, the population of exceptional individuals served during the 1987 school year was 65% white, 24% African-American, and 8% Latino. Based on these data, the authors concluded, Black youth are more highly represented in every disability category respectively (Artiles & Ortiz, 2002).

These indicators are crucial because they highlight the problem of disproportionate representation of students of color served in disability programs. According to the USDOE and NICHD (as cited in Gyovai, Cartledge, Kourea, Yurick, & Gibson, 2009), 56% of ESL students with special needs experience extreme challenges in reading (Artiles, Bartletta, & Klingner,
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2006). According to Valencia and Bully (2004), schools with a high population of learning-
disabled students continue to suffer the consequence of the state’s demands.

Impact of parents’ perceptions on students’ learning

To widen the lens through which researchers analyze parents' characteristics and experiences are considered, Pong and Landale (2012) examined the impact of pre- and post-
migration parent characteristics and the home environment on student achievement. In a study involving 2,147 children aged 6-12, it was revealed that parents' pre-migration education is more strongly associated with children’s academic achievement than any other pre- or post-migration attribute. The study used three variables to measure the demographic characteristics of children of immigrants: whether the child was born in the United States; whether the child had one parent who was born in the United States (the reference group had two foreign-born parents); and if the child’s country of origin was Mexico or another Latin American country.

The study found that parents with high pre-migration education believe that more education makes children perform better on tests. Further, the study found that parents who are employed post-migration are associated with improved children’s test scores. Patel and Stevens (2010) focused on discrepancies between parents', teachers', and students’ academic abilities. The perceptions held by parents, teachers, and students concerning students’ academic abilities affected parental involvement and teacher facilitation of school programs. In general, as discrepancies increased between parents and teachers or between parents and students, parents tended to be less involved and teachers tended to facilitate fewer programs for parental involvement (Patel & Stevens, 2010). The study indicates that perceptions of student ability held by teachers, parents and students have an influence on parents and teachers’ actions regarding family and school partnerships. Therefore, to successfully promote parental involvement,
educators need a better understanding of factors that facilitate or impede cooperation and collaboration by parents and teachers (Patel & Stevens, 2010).

McGrath and Repetti (2000) observed that parental satisfaction with children’s school performance was strongly associated with children’s perception of academic competence and independent of children’s actual school performance. The study revealed that children who were perceived to be academically competent had parents who valued academic success (McGrath & Repetti, 2000). However, this positive association masked crucial differences between highly-competent children and children who were performing poorly in school. Students who were perceived as possessing lower academic competence had parents who placed less importance on academic success.

Assessment

Forty percent of students in the United States fail to meet reading fluency benchmarks (Walsh, Glaser, & Wilcox, 2006). Some of these students require more intensive instruction than regular classroom teachers can provide. Al Otaiba and Torgesen (2007) stated that without intensive instruction, these students will not make adequate progress.

Another critical challenge educators face is identifying struggling readers through high-stakes assessments. Factors other than reading deficiencies may cause poor test scores. For example, many students find it difficult to reach testing benchmarks due to cultural biases in the tests. As Swartz (1992) stated, “master scripting silences multiple voices and perspectives, primarily legitimizing dominant, white, upper class, male voicing as the ‘standard’ knowledge students need to know” (p. 341). Valencia and Bully (2004) found that legislators, administrators, and parents often rely on the results of a single assessment to make important instructional decisions.
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National economic struggle

The literacy achievement gap is urgent because the United States is increasingly diverse; the relationship between educational success and socioeconomic opportunity is strong; and the relationship between the educational achievement gap and social conflict is manifest (Schwartz, 2001). Schwartz (2001) suggested, “there is also greater potential for closing the achievement gap as a new resolve to do so takes hold” (p. 2). Educating all children for literacy is a long-term commitment to educational improvement. Children should be our nation’s priority, and when this happens a wide range of supportive resources will be provided for their education (Schwartz, 2001).

Individual Struggles for Readers in K-8

Decoding

Lack of fluency and the inability to read multisyllabic words separates many students from their higher-performing peers (Archer, Gleason, & Vachon, 2003). Students need instruction in decoding long words using one of three approaches: reading segmented words part by part; decoding different syllable types; or using a flexible strategy for reading long words. Students must also engage in practices such as oral guided reading, choral reading, partner reading, and repeated reading activities (Archer, Gleason, & Vachon, 2003). If students engage with these suggested practices consistently, they may achieve significant gains in reading.

Comprehension

Reading comprehension is a critical factor in reading success. It enables a reader to gain focus. In a study of students with learning disabilities aged 6-12, Solis, Ciullo, Vaughn, Pyle, Hassaram, & Leroux, (2012) found that explicit instruction in comprehension is beneficial to students who consistently apply the strategies. Allinder, Dunse, Brunken, & Obermiller-
Krolakowski, (2001) found that fluency increases reading rates while accuracy improves reading comprehension. Other studies suggested a diminishing relationship between reading accuracy with word recognition, fluency, and comprehension worked better with secondary students that struggle in reading comprehension, particularly students who speak English as their first language (Grabe, 2010).

Reading comprehension is key to elementary, secondary, and post-secondary success (American College Testing [ACT]. 2006, as cited in Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006). It is troubling that only approximately 50% of students who graduate from high school has the reading ability skills to read succeed in college (ACT 2006). In addition, 70% of students who took a remedial reading course did not have a degree or a certificate eight years after enrollment. Reading can be difficult for students with inattention and hyperactivity, as evidenced by lower scores on standardized reading tests, especially in early elementary grades (Swanson, Barnes, Fall, & Roberts, 2018). Researchers synthesized this important body of literature and proposed the Direct and Inferential Mediation (DIME) model, hypothesizing that there is a relationship between background knowledge, inference making, reading comprehension strategies, vocabulary, and word reading.

Fluency

According to Peebles (2007), reading fluency is the ability to read accurately, expressively, and automatically. Educators and researchers are recognizing that fluency is an essential element in reading programs, especially for struggling readers (Hudson, Lane, & Pullen, 2005). In addition, Stanovich (2009) observed that reading fluency is one of the determining factors for good readers among poor readers. The author asserted that once struggling readers learn sound relationships and become accurate decoders, they become more
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fluent. At this stage, students can read proficiently. The relationship between decoding and fluency is critical as poor readers read in a disconnected manner. If they are taught how to decode, it makes reading text less difficult and reading fluency more accessible.

The NICHD (2000) described fluency instruction as “particularly important for struggling readers who often have slow and laborious oral reading, which makes comprehension of text virtually impossible” (p. 578). The organization suggests that teachers incorporate movement into fluency instruction. Doing so enables students to conceptualize the rhythmic nature of fluent, expressive reading so that they experience how fluent reading should sound. Peeples (2000, as cited by Walet, 2011) suggested that movement is a proven technique to motivate struggling readers. According to Tyler and Chard (2000), readers' theater is an authentic medium for encouraging struggling students. It involves rehearsing a passage through repeated readings and incorporates movement through gestures and facial expressions. It is a multidimensional approach to reading, which for many instructors is a key to success.

Similarly, scholars and practitioners have identified “authentic rhythm” as a motivational technique which engages struggling readers and elicits changes in reading behavior while generalizing skills to new experiences. Tyler and Chard (2000) described how rhythm activities enable students to engage in reading variations, such as intonation and speed, which helps spark significant growth in their fluency and confidence. The authors argue that teachers should develop three strategies when teaching students to be fluent readers: choose the right text; allow students to move while reading; and return to the original texts.
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Phonological awareness

A major problem struggling readers face is the inability to process the phonological features of a language (Torgesen et al., 1999). Researchers argue that readers can achieve fluency if they can recognize and decode words in the text (Jasmine & Schiesl, 2009). The ability to decode words using knowledge of the relationships between letters and sounds assists students in reading with speed, accuracy, and expression. Students are motivated if they know the meaning of a wide variety of words and the structure of written language.

Readers acquire reading speed through interventions such as a word wall: a collection of high-frequency sight words that are age appropriate, classified into groups or categories, located on a classroom wall for children to easily see and learn (Jasmine & Schiesl, 2009). Able readers achieve fluency as they recognize words with speed and build upon them to aid in comprehension.

Motivation

Motivation is important for struggling readers. Reading motivation is important because teachers instruct students with repeated opportunities required for them to learn. When motivation is used effectively in instruction, students demonstrate measurable improvements and transfer learned skills to a new situation.

It is difficult to convince a reluctant reader that the best way to improve their reading is to read the same passage repeatedly. Incorporating movement into fluency instruction motivates students to read, (Peebles, 2007). Additionally, readers' theater is effective in promoting reading fluency because it involves movement and has been motivational for grades two through six in both regular and special needs literacy classrooms. Readers' theater involves “rehearsing a
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passage, with the use of movements such as actions, gestures, and facial expressions, and presenting it to an audience with script in hand” (Peebles, 2007).

When teachers use a movement-based motivational approach, they first model how students should take turns to read the Rhythm Walk by using fluid movements and mastering the key elements of reading fluency such as accuracy, rate, and prosody. Teachers must allow students to move, become creative, and take charge of their own learning. A key element of this strategy is that the teacher goes back to the original text, which makes it easier for students to practice fluency skills related to the original text. Many teachers have implemented these strategies effectively, improving their students' reading and comprehension skills (Peebles, 2007).

Literacy Limitations

The NELP Executive Summary Report addresses questions on the limitations of early literacy (Lonigan & Shanahan, 2009). The research focused on NELP’s primary goal of identifying interventions pertaining to parenting activities and instructional practices that promote the development early literacy skills. The researchers developed a methodology that allowed them to identify published studies relevant to their questions, a coding system to combine and compare studies, and an analytical method. Their search yielded 8,000 potential articles.

After screening based on established criteria, they conducted a meta-analysis of 500 research articles. The analysis indicated a correlation between children’s early abilities and skills; later literacy development; and the impact of instructional intervention on children’s learning (Lonigan & Shanahan, 2009). The study's key findings are that it is impossible to ascertain what programs or practices were most effective because, even with the best of
circumstances, young children develop few conventional literacy skills, such as “decoding, oral reading fluency, reading comprehension, writing, and spelling” (p. 3), before starting school.

**Successful Intervention**

Educators have identified successful interventions for struggling readers. Direct and explicit instruction is a form of modeling and guided practice that involves imparting new information to students through meaningful teacher-student interaction and guided student learning. According to Rupley, Blair, and Nichols, (2009), most reading instruction is classified as either a skill or cognitive-based strategy. Skill-based strategies involve low-level cognitive processing, which are specific and automatic (Rupley et al., 2009).

**Cognitive-based strategies**

During skill-based learning, the teacher employs a high degree of structure. Cognitive-based strategies, which require high-level cognitive processing, are less specific than skills and are anchored by intentional, deliberate procedures under the teacher's command. At the heart of the direct instruction method are explicit explanations, modeling, demonstration, and guided practice. Direct, explicit instruction is an integral part of learning the major content strands of the reading process such as phonemic awareness, phonics, fluency, vocabulary, and comprehension (Rupley et al., 2009). Although researchers have explored explicit instructions in comprehension, fluency, and guided practice, there is less research on modeling, reading concepts, strategies, and skills. According to Dewitz, Jones, & Leahy (2009), many teachers in the United States elementary schools’ classroom rely on basal or core reading programs (CRPs).

The (CRPs) is nationally marketed to provide elementary teachers with reading instruction that is core towards teaching phonemic awareness, phonics and vocabulary. The core
reading program lessons recommended are guided practice. It is the instructional strategy most recommended for explicit instructional move for teaching phonemic awareness, phonics and vocabulary. Explicit instruction features less emphasis on modeling or discussing reading concepts, strategies, and skills. Also, explicit instructional strategy provides inadequate recommendations for monitoring student progress, providing students with feedback, and moving students toward independence (Reutzel, Child, Jones, & Clark, 2014).

In cognitive strategy instruction, teacher directness and control are more relaxed than with skills learning. When experiencing direct, explicit instruction, the communication between the teacher and students is active. Rupley et al. (2009) stated that while both skills and cognitive learning are successful in teaching reading, they require different lesson presentation methods. Struggling readers are more likely to learn essential reading skills and strategies if the direct or explicit model of instruction is part of the teacher's repertoire. A number of studies demonstrated the importance of direct or explicit instruction to student learning. (Rupley et al., 2009).

Researchers have studied how to foster reading growth with direct, explicit reading skills and strategies in preschool and elementary school reading programs. The most useful strategy to direct, explicit instruction is active communication and interaction between teacher and student (Rupley et al., 2009).

**Summer Opportunity to Accelerated Reading (SOAR) program**

Another successful reading intervention for ESL is the SOAR program. Developed by Janice Cury in 2000, SOAR is an early intervention program geared toward accelerated literacy learning for at-risk students in kindergarten through grade two. SOAR bridges the gap so students do not lag behind with reading progress during the summer. After its initial introduction, researchers measured the program’s effectiveness at the end of the year and found that students’
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reading literacy improved. Students advanced one or more levels on the Developmental Reading Assessment (DRA). Teachers, principals, parents, mentor teachers, and project managers provided positive feedback, recommending the program as effective and beneficial. Students benefited from the SOAR program because of its highly-structured schedule and curriculum, which aligned with the daily instructional program. This program motivated students and benefited teachers. Teachers also reported that the program provided them with adequate professional development and many strategies to enhance their teaching.

Read 180

Read 180 is for students in kindergarten through second grade who read below grade level. Students are placed in a 90-minute instruction bloc. The class then divides into three rotations of 20-minute small group instruction with a teacher. The instruction includes shared reading, watching learning videos, reading integrated science and social studies texts, and teaching comprehension, vocabulary, and self-monitoring strategies.

Reading Mastery 1

Initially, the Reading Mastery 1 program works on oral language skills and verbal comprehension. Students then transition to recognizing letter sounds. Once students master individual letter sounds, they then shift to understanding consonant blends. Teachers use a variety of hand signals to communicate with the children and administer individual tests following a set of ten lessons. Once students master phonics instruction, they transition into basic sight word recognition followed by reading short sentences and stories. The program does not use capital letters to prevent confusion. Teachers group children based on an assessment at the beginning of the year. Throughout the year, assessments drive instruction. If a student masters a concept, they move on, and if they need help on a topic, they are retaught and reassessed until
they master it. The groups are fluid, allowing children to move to different groups based on their current ability levels.

**Reading Mastery 2**

Reading Mastery 2 is a small group-based program geared toward fluent readers who have mastered Reading Mastery 1, typically those in grades two and above. Reading Mastery shares similar components as Response to Interventions, which provides direction reading intervention in the classroom. The reading mastery program examines and provides the teacher with an overview of effective reading instruction oral, reading, decoding, and comprehension. Additionally, RM aligns with the research on effective skill development approaches such as RTI in these areas is provided (Schieffer, Marchand-Martella, Martella, Simonsen, & Waldron-Soler, 2002). The focus of this phase is purely comprehension and involves spiral instruction. Students review vocabulary words, read information passages, and answer quiz questions.

**Phonological Awareness Literacy Screening (PALS)**

Calhoon, Otaiba, Cihak, King, & Avalos (2007) examined the efficiency of a peer-mediated reading intervention program called PALS. PALS is a supplemental program designed to improve the reading fluency subskills of first-grade students in two-way bilingual programs (TWBI). TWBI programs, also known as dual language programs, are designed to integrate ELLs and English proficient (EP) students for content and literacy instruction in both languages (Calhoon, Otaiba, Cihak, King, & Avalos, 2007). In a PALS Español two-way immersion classroom, students assist their peers, with teacher supervision. PALS students participated in 30-hours peer-mediated early intervention that is conducted for about three times a week (Calhoon, Otaiba, Cihak, King, & Avalos, 2007).
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The PALS program is supplemental to classroom core reading instructional programs that takes 20-25% of the 90-minute reading block for half of the academic year. PALS has shown to be effective in helping teachers adapt instruction for students with different levels of achievement (i.e., high, average, and struggling learners). For 15 years, PALS has demonstrated the effectiveness of peer tutoring in many classrooms, improving the reading performance of high-, average-, and low-performing students, including students with disabilities, from kindergarten through high school. (McMaster, Fuchs, & Fuchs, 2006). More recently, the PALS program has raised a dispute among teachers who feel unequipped to admit diverse students with and without disabilities in their classrooms, even when they have interventions readily available for use (McMaster, Fuchs, & Fuchs, 2006).

Chapter 1

According to Glass and Smith (1977), an effective pull-out program for grades K-8 is a federally-funded Title I program previously known as Chapter 1. Chapter 1 programs provide one-on-one tutoring in reading rather than small-group pull-outs or reduced class size. The program is a method or type of school organization for Title I eligible pupils. In the program, students are pulled out of general education classrooms to receive instruction from a remedial specialist teacher. The “pull-out” model has emerged as a prominent feature of compensatory education in the past few years, and policy-makers, researchers, and educators alike seek to examine its effectiveness. On average, about 75% of students receive remedial reading instruction in the pull-out setting. Of the students in this setting, 45% receive mathematics instruction and 41% receive reading instruction (Glass & Smith, 1977). When this number was corrected to eliminate students in 100% Title I eligibility classrooms who do not need to be “pulled out”, the pull-out rates rose in all the classrooms to 84% for reading, 54% for
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mathematics, and 50% for language arts. In most Title 1 schools, the average amount of time designated for pull-out ranges from 90 minutes to four days per week. There are some disadvantages to pull-out on the elementary school level as one-fifth of “pull-out students miss regular classroom instruction in the subject for which they are removed from the regular class (i.e., they are “pulled out” of regular reading to receive remedial reading). Twenty-five percent miss social studies; one-seventh miss science; 33 percent are pulled out during a study period and do not miss academic instruction” (Glass & Smith, 1977).

Inclusion Reading and Success Maker

Slavin, Lake, Davis, & Madden, (2011) found the criteria for Inclusion Reading Intervention with the Federal Reading First Office, SRA, Reading Mastery (McGraw-Hill) and Success Maker, a computer-assisted program (CAI), to be successful with struggling middle and secondary students. They evaluated the program with students grouped according to ability, with block scheduling, and with gender-segregated classrooms. The initial implementation of the program included students in grades 7-12, and compared students in the program with children learning in either a standard or alternative reading program. The largest effects were for instructional-process programs such as cooperative learning, classroom motivation and management, and other approaches that focused on changing teacher and student behaviors during daily lessons.

General Practices for Successful Intervention

Reading amounts

Allington (1977) stated that for struggling readers to become fluent readers, educators must develop and adopt remedial techniques and engage in a host of training programs to support
their efforts. If effective teachers produce better achievement regardless of which curriculum materials, pedagogical approach, or reading program they use, students' reading fluency will improve (Allington, 2002). Teachers should evaluate the amount of text students engage with during each lesson, with a recommended minimum of 500 words (Allington, 1997). In addition, Allington (2014) argued that, “both instructional moves and interrupting oral reading performances and asking low-level literal questions following the reading of a story, are at best unproductive and worst that both undermine useful literacy development” (p. 16). Instead, Allington (2016) recommended that teachers refrain from interrupting fluency by encouraging readers to do such things as “sound it out” or “look at that word again.” It is a challenging task for many teachers, but it allows readers to gain more reading time and develop into independent readers who implement their own set of strategies as needed.

**Resources**

McKeon (1987) examined stand-alone pull-out program types that bring together students from several schools in a resource center. “ESL-plus” programs include bilingual education, structured immersion, sheltered English, content-based, and high-intensity language training programs. Additionally, choosing a program design for a given set of circumstances is complex, but the best program organization is tailored to meet the students' linguistic, academic, and affective needs; provides ELL students with the instruction necessary for progress through school at a rate like their native English-speaking peers; and makes the best use of district and community resources.

**Engagement**

Several factors cause students to disengage during reading instruction. According to Karchmer (2001), teachers play a critical role in student engagement. Available research shows
that most teachers in the U.S. decide when they will cover a certain topic, how their lessons will be structured, and the materials they will use with their students. Using six literacy teaching methods, Davis and Guthrie (2003) examined how to help teachers assist struggling readers in middle school. The authors suggested that to ignite student engagement, teachers should construct rich knowledge goals as a basis for reading; connect students’ experiences to real world interactions; give students an abundance of high-interest books and materials; provide choice among materials; provide direct instruction for reading strategies; and encourage collaborative learning.

Additionally, Quirk and Schwanenflugel (2004) created five popular remedial reading programs that address the motivational issues for struggling readers. The researchers argued that current reading intervention practices ignored the impact of motivation on struggling readers (Quirk & Schwanenflugel, 2004). Lenz, Bulgren, Kissam, & Taymans (2004) stated that as classrooms become increasingly diverse, educators have the incredible challenge of teaching all students. Because of the increase in classroom diversity, school systems must meet not only academic needs, but also emotional and social needs of students with different degrees of academic achievement (Lenz et al., 2004).

**Differentiation**

Santamaria and Thousand (2004) view academic diversity as “a central concern of U.S. educational stakeholders” (p. 13) and contend that an education system’s duty “is to ensure equitable access to the core curriculum for all children” (p. 13). The authors further argue that school districts are not meeting their students' needs. Tomlinson (2004) defines differentiated instruction as a teacher's role in developing an effective curriculum and providing rigorous instruction for students, ensuring learner responsibility. The concept of differentiated instruction
can be defined in many ways, such as what a student learns; how they learn; and how they show what they have learned based on their readiness level, interest, and preference of learning mode. One may think that differentiated instruction is a new concept in the educational field, but it has been around since the 17th century (Gaundlach, 2000, as cited in Senturk, 2018). Tomlinson and Moon (2013) stated that, “in many classrooms, the approach to teaching and learning is more unitary than differentiated” (p. 1). Many teachers are not accustomed to differentiating, and it is difficult for them to imagine how a differentiated classroom would function (Tomlinson & Moon, 2013). Teachers must understand that “simply giving a 'normal' assignment to most students and 'different' assignments to students who are struggling or advanced is not differentiated instruction” (Tomlinson & Moon, 2013, p. 14).

Assessments for Struggling Readers

Before discussing various types of informal and formal assessments for struggling readers, it is important to reiterate that education leaders contend that assessments are often unfairly used for increasingly high stakes decisions. Kieffer, Lesaux, Rivera, & Francis, (2009) asserted that educators are increasingly paying attention to large-scale assessments and the growing number of ELLs in schools. As stated previously, ELLs are often not properly prepared for these assessments due to their language abilities (Butler & Stevens, 2001). Often, schools provide students with limited language proficiency with testing accommodations to measure growth in English as an alternative for accountability until their language skills are enough to ensure testing success (Butler & Stevens, 2001).

Solano-Flores (2008) asserted that testing ELLs is, to a large extent, a random process because of poor implementation and factors that are uncertain or beyond control. He asked, “Who is given the tests? In what language? By whom, when, and where?” (Solano-Flores, 2008).
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He maintained that such a flawed conceptual framework does not take into consideration that multiple contextual factors shape bilingual behavior. Solano-Flores and Trumbull (2003) suggested that to ensure assessment validity and testing equity for ELLs and other students from culturally diverse backgrounds, there must be a paradigm shift in test review and development, and the treatment of language as a source of measurement error.

**Informal Assessments.**

Educators must provide struggling readers with effective informal assessments that drive instruction in real-time. According to Rinaldi and Samson (2008), as the ELL population grows, the need to intervene. Researchers have touted RTI as an effective intervention model which uses adaptive evidence-based instruction. RTI employs three assessment tools to measure students' learning, especially those with learning disabilities. Students receive pre-referrals, referrals, assessments, and individual evaluation development assessments. Researchers conducted assessments in three steps through multiple data from team observation twice per month; participant interviews; and data analysis (Seidman, 2006).

**Summary**

This chapter examined intervention research studies that have proven to be successful for struggling readers, including those that offer critical views of the current educational testing system for struggling readers. Such critics include Rupley, et al. (2009); Crosnoe (2013); Quirk, and Schwanenflugel (2010); Gamez and Lesaux (2015); Spear-Swerling (2015); and Artiles and Ortiz, (2002). Additionally, Abedi, Hofsteller, and Lord (2008) cautioned educators, states, districts, and school representatives against large-scale assessments of students with learning disabilities or those with a limited English background.
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Furthermore, Torgesen (2007) contended that without intensive instruction, students will not make adequate progress because good readers must have meaningful classroom instruction, a wide variety of high-interest reading materials and a good rate of fluency to understand what is being read. These three components are essential to reading proficiency. Additionally, Artiles, Bartletta and Klingger (2006); Quick and Schwanenflugel (2010); and Davis and Guthrie (2003), suggested five distinct remedial reading programs that motivate struggling readers to read, which, if applied properly by the best trained teachers, could close the gap between struggling readers and their grade level peers.

There are successful and unsuccessful reading interventions for struggling readers. Karchmer (2001) analyzed the impact of teacher effectiveness on academic achievement. The research also outlined different factors that disengage students from reading and identified six best practices that are successful in teaching struggling readers. Allingting (1997) described how teachers can supporting struggling readers by developing them into fluent readers. Pong, and Landale (2013) discussed the impact of parent perception on academic success. When parents engage in a partnership with the educational environment, they acquire tools that help them widen their views on how best to support their children.

Hersi and Watkinson (2014) implemented a revised pull-out program for the underserved immigrants to strengthen family and community networks, a belief in education, and optimism about the future. Also, Hudson, Mercer, and Lane (2000) discussed how effective pull-out interventions programs for struggling immigrants and students from poor socio-economic background which help students read accurately at an increased rate and effectively express themselves in conversations. The literature reviewed provided a base for understanding the current study on the effectiveness of pull-out program on struggling readers in Catholic schools.
Chapter 3: METHODOLOGY

Introduction

This chapter discussed the research questions and tested hypotheses. Next, it discussed intervention design, teacher training, data collection, and the sample groups. Further, it explored the effects of aligning classroom core reading instructions with the supplementary reading interventions provided to 253 struggling grade K-8 readers. Research has shown that some students still struggle year after year in comprehension, and have appeared in Title 1 reading intervention schedule because some reading intervention programs have proven ineffective and do not address the student’s individual(ized) needs (Torgesen, Myers, Schirm, Stuart, Vartivarian, Mansfield, & Haan, 2006). For this reason, this study was undertaken to identify and assess reading interventions that could serve to remedy reading deficiencies among students especially those of immigrant background who mostly are English learners. The study addressed the following research questions and tested the following hypotheses to answer them.

Research Questions

Research Question 1: What is the effect of intervention programs on struggling readers’ comprehension scores?

Research Question 2: What is the impact of the pull-out program on the overall literacy of struggling readers?

Hypotheses

Null Hypothesis 1: The intervention program does not have an impact on struggling readers’ comprehension scores

Alternative Hypothesis 1: The intervention program does have an impact on struggling readers’ comprehension scores
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Null Hypothesis 2: The pull-out program does not have a significant impact on the overall literacy of struggling readers

Alternative Hypothesis 2: The pull-out program has a significant impact on the overall literacy of struggling readers

Design

Quantitative, repeated-measures, design that evaluated participants’ growth in reading literacy throughout the school year was adopted for this study. The design was considered appropriate because quantitative data on students’ performance in reading and comprehension generated by Scantron Performance Series (SPS) was used to evaluate students’ growth and, thus, the effectiveness of the pull-out interventions. Repeated-measure statistical test was conducted since participants’ growth was assessed at baseline and at posttests (Shadish, Cook & Campbell, 2002). The data were collected at the beginning, middle, and end of the year following school-wide Scantron Performance Series diagnostic assessments.

Before data collection at baseline, faculty participants had professional development focusing on reading literacy. In the first phase, they were trained on how to interpret or analyze students’ standardized test scores in the Scantron Performance Series reading assessments. The objective was to identify students who were at risk of reading failure or disability and their specific areas of weakness. This was necessary so that target areas could be marked for interventions. The identified areas, that is, the observed deficiencies in students’ reading literacy were code-named “teachable moments”. Teachers used this code name because they saw those deficiencies as opportunity for a renewed commitment to remedy the situation.

Following faculty training on interpretation of students’ scores on reading literacy, the second phase of the professional development evaluated the existing Title 1 program in the
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participating schools. The purpose was to find out why such program seemed ineffective to accomplish the desired goal of helping students read at grade level. Despite the fact that students were being pulled out for the Title 1 reading program, significantly, they were still performing below grade level. The consensus at this time was that it was about time something new was done about the situation. Faculty agreed to team up or collaborate among themselves and with the Title 1 teachers. They shared information about reading ability of particular at-risk students. Additionally, they shared lesson plans, resources, and standards covered in the classrooms for re-enforcement. Faculty visited each other’s classrooms and discussed the relevance of enriching the existing Title I program in the schools. Teachers welcomed the idea since students in the program still struggled in their individual classrooms.

In the next phase of faculty training, emphasis was on identifying new intervention materials and methods and the role of Title 1 teachers and grade level leaders in the pull-out instructions. “I Excelled” (IXL CARI) was identified as appropriate interventions’ materials. The choice of IXL was based on the reasons that it was student-friendly. Students can use it both at home and in school to practice and work on assigned tasks. The program allows teachers to monitor and follow up students on assigned tasks even at home. Additionally, IXL addresses areas of reading literacy measured in the Scantron Performance Series assessments such as vocabulary, phonemics awareness, fluency, decoding and comprehension. The program can also detect a student’s zone of proximal development and accordingly assign tasks to improve a student’s reading ability. For all these reasons, the IXL computer program was considered and adopted as appropriate for the new pull-out interventions for struggling readers addressed in this study.
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Population and Sample

The population for this research project was 651 Kindergarten through eighth grade readers in the Archdiocesan Catholic Schools in northwest and southeast quadrants of the District of Columbia. The population of students represented was English Language Learners (ELL) Afro American, Immigrants from Nigeria, Philippines, Eritera, Dominican Republic, Jamaica, Uganda, Ethiopia, Haiti, and Elsavador. A significant number of these students live in dangerous neighborhoods, are of single parentage and low socioeconomic background (McDonald & Schultz, 2018). Specifically, participating schools each had about 41% of students living below poverty line and about 59% of students from single-parent home. In all, free or reduced-price lunch is provided for over 49% of the student population.

The demographics at a participating school show that diversity in school leads to long-term benefits for students which includes Black 99%, Hispanics, American Indian/Alaska Natives, Whites and two more races with 1% population respectively. The demographics at other participating schools show a high percentage (68% and 99%) of African American families. From these population and background, 253 struggling readers were selected to form the study sample. They were selected across all participating schools following the beginning of the year Scantron Performance Series assessment in reading literacy. Their performance in reading literacy at this time was used as baseline assessment.

Sampling Method

As evident above, the treatment group for this research project was a convenience sample of struggling readers at risk of reading failure or developing reading disability. The study employed a single stage sampling method, deriving data from a single group of students.
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(Creswell & Creswell, 2017) — struggling readers. Convenience sampling was used since students struggling in reading were readily available in the schools. They were easily identifiable by their baseline performance in the Scantron Performance Series assessment which measures students’ ability in phonemic awareness, fluency, decoding, and vocabulary and in reading comprehension. Those who were adjudged “at-risk” at the beginning of the year were identified and marked for the pull-out program. If students scored in the at-risk or below grade level range on the Scantron Performance Series assessment, principals were notified of those children’s need for participation in the pull-out intervention study. Students who qualified for the Title I program but refused to attend the pull-out (probably on parents’ directive) stayed with their regular classroom teacher during pull-out reading time.

The first step in sample selection was to conduct a school-wide Scantron Performance Series inventory to determine the Lexile ranges. Those students who scored in the basic reader range were considered for possible placement into the reading intervention program. Two hundred and fifty-three (n =253) Title I reading intervention students in grades K-8 in the targeted Catholic schools in the District of Columbia were selected. Participants were identified based on their ratings as below average, low average or high average levels on Scantron Performing Series (SPS) test scores. The Scantron Performance Series assessment provides lists of student performance indicators, derived from national norm research using student data and a comparison to grade-level peers nationwide. The assessment uses signifiers such as “below average”, “low average” and “high average” to respectively designate students who are “most at risk”, “more at risk” and “at risk” of reading failure score. For this study, “at-risk” students were simply defined as those who scored below the inter-quartile range for their grade. Any student who performed below the inter-quartile range for their grade was considered “at risk” and
eligible for placement in the school-based pull-out program. They formed the sample of this study.

**Ethical Considerations**

Confidentiality of participants’ names and identity was maintained by assigning a code to each student’s name. Only the intervention teachers and the lead researcher had access to the names. The data collection was anonymous to protect confidentiality of participating students. The de-identification process was used to prevent student’s identity from being connected with the information. Student names, social security numbers, dates of birth and zip codes were kept confidential. The information was stored in the researcher’s private system and was used to answer the research questions. Participation was free and voluntary. Students who scored below the inter-quartile range for their grade were targeted for the study unless they declined participation, for instance, on parents’ directive. Data collected were used strictly for the purpose of this research.

**Intervention Focus**

The focus of the pull-out interventions was on improving the literacy skills of participants who were at risk of reading failure. Participants’ literacy ability was assessed by their performance in the Scantron Performance Series standardized tests. Therefore, their literacy skills were defined as phonological awareness, phonics, fluency, and vocabulary, decoding and reading comprehension (fiction and non-fiction) since Scantron Performance Series tests cover those areas. More so, research has shown that literacy ability of struggling readers can be improved by focusing on their word reading efficiency, reading comprehension, vocabulary, and oral reading fluency (Scammacca, et al., 2016).
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Intervention emphases varied across grades consistent with research recommendations (e.g. Richards –Tutor et al., 2015). For students in grades K-1, interventions focused on reading foundation skills that addressed phonics, phonological awareness, text comprehension and vocabulary. For those in grades 2-8, intervention focused on fiction and non-fiction, reading of long passages and on vocabulary. Participants’ baseline performance in the Scantron test was used to identify these areas of focus. The areas were identified as those in need of remediation since participants performed poorly or below average there.

Interventions were explicit and systematic, focusing on the identifiable areas of phonological awareness, vocabulary, phonics, fluency, and reading comprehension. Methods such as modeling, differentiation, push-in, scaffolding, and corrective feedbacks, among others were used. Participants were given individualized support that enhanced learning. Teachers or intervention providers modeled tasks to participants, gave advice and followed up. They monitored students in phonemic awareness, phonics, fluency and vocabulary and in reading comprehension. Overall, interventions were student centered geared towards participants’ understanding, reflection and ownership.

Participants learned using materials from the Title 1 Inspire curricula, which is a program designed to help “at-risk” readers. The materials were provided by the District of Columbia Public Schools (DCPS) Title 1 office. Each class focused on teaching reading strategies to assist students in achieving grade-level standards. The students, who were “at-risk” but did not participate in the pull-out program as explained above, did not receive any intervention. Instead, they received instruction from the regular classroom teacher during the pull-out intervention time. They remained in their classroom for regular instruction for the entire school year during the course of this study.
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**Intervention Personnel and Intervention Delivery**

Reading specialist and Title 1 teachers taught in the pull-out program and followed the lesson plans. Title 1 is the District of Columbia-sponsored grant program which allocates teachers to public and non-public schools’ students who are at risk of reading difficulties. Teachers from these programs featured in the pull-out intervention delivery. They were not permanent teachers in the participating schools. A reading specialist was hired by one of the schools specifically for the purpose of the research. All teachers are certified and licensed to teach in the District of Columbia. They have master’s degrees in relevant areas of education with many years of teaching experience in reading and literacy. The reading specialist, for example, has master’s degrees in educational leadership and in reading and literacy. She is licensed to teach reading and literacy, and has been doing so for well over 18 years. Her method of giving reading intervention is mostly one-on-one, small group instruction, differentiation, and push-in.

Above personnel were the primary intervention providers for the research project. They were supervised by the researcher in her own school, by the principals in the other participating schools, and by the Title 1 program management services throughout the duration of the study. The personnel collaborated with regular classroom teachers. As discussed earlier, teachers in all participating schools were briefed and brought on board for the purpose of the research project. For instance, all K-8 teachers participated in the school-wide teachers' collaboration days in winter and spring of the 2018-2019 school year. Kindergarten, first grade, and second grade teachers attended two days of training on a supplemental reading foundations assessment. Third through eighth grade teachers attended two days of professional learning on the Danielson framework for English Language Arts. The purpose, among others, was to gear them towards
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the research project on assessing the effectiveness of pull-out programs for struggling readers in the targeted schools.

Interventions’ providers collaborated with homeroom teachers so that everyone could be on the same page. On some school days, intervention providers re-introduced pulled-out students into regular instruction classes and sat in to observe. The purpose was to detect the students’ progress or otherwise and direct interventions accordingly. Homeroom teachers taught students but those at risk did not have mastery of the topic. Therefore, they were pulled-out and intervention teachers took over to review, re-teach, and reinforce learning of the topic. Based on identified areas of literacy weakness of the students pulled-out, for the interventions, the students were grouped in three clusters: K-1, 2-5, and 6-8. K-1 focused on reading foundation skills such as phonics, phonemic awareness, text comprehension and vocabulary. Grades 2-5 and 6-8 clusters focused on fiction, long passage, non-fiction, and vocabulary.

Research has shown that intensity predicts the effectiveness of reading interventions and has outlined factors such as group sizes, time per session, and duration, identification of areas of students’ reading needs and extensiveness of instructions as those necessary for intensity (Vaughn, Denton & Fletcher, 2010). For the current study on Catholic schools, interventions were directed on identified areas of students’ reading weaknesses as discussed above. Their delivery was explicit and systematic. And it was given in small group sizes as follows: one student with one teacher (1:1), two students with one teacher (2:1), and three students with one teacher (3:1). Other groups were four students with one teacher (4:1) and five students with one teacher (5:1). Placement of students in the groups was based on students’ pretest (or baseline) assessment in the Scantron Performance Series test which indicated the severity of students’ reading difficulties.
Interventions were given for 45 minutes per session. They were given twice in a week for each grade for duration of 9 months, covering the entire school year. This means that there were 10 intervention sessions in a week, 40 sessions in a month and 360 sessions for the school year. Sessions always began with play time or end with play. The objective of the play time was to motivate and ease participants into intervention lessons. The play was computer gaming. Participants were split into groups and made to compete with each other, playing computer games. Gaming was a way to motivate their participation and involvement. Other excitements for participants’ motivations were pizza party, candy party, and basking ball. Participants had opportunity for basking balls in the gymnasium and they were all excited to do this as part of their intervention time. They were also sometimes taken on walks around the school block during which time they could play and talk with friends. In addition to all this, teachers employed intrinsic motivation focusing on making participants learn for learning sake. Intervention teachers taught participants lessons targeting areas of weakness to reinforce instruction. They provided instructions on reading skills using relevant textbooks at the end of which students practiced on IXL or Stride Academy. The intervention teachers supported participants by going over a particular topic they had difficulty. After participants had practiced what they learnt, IXL or Stride Academy provided teachers with feedback or report of each participant’s understandings of the topic before teachers introduced new concepts or topic.

**Instruments and Data Collection**

Quantitative data on student’s reading literacy came from Scantron Performance Series (SPS) assessments at all participating schools at the beginning, middle, and the end of the school year. The Scantron Performance Series assessments measure academic achievement or gains of
individuals or groups of students in line with the Common Core State Standards. The test offers teachers reliable and valid information about students’ academic gains in such areas as reading, mathematics, language arts, and science (Johnson & Christensen, 2014; Rosnow & Rosenthal, 2008). What this means is that the Scantron Performance Series assessments consistently measure students’ academic gains in particular context according to the rigor demanded by the Common Core State Standards, and that teachers’ interpretation of students’ academic ability based on those gains are correct. The Scantron Performance Series test has high reliability expressed as standard error of measurement, which indicates a confidence interval within which student score will fall (Scantron, 2018). In view of its high reliability, it was expected that the test would validly and reliably indicate the gains (or declines) in reading ability of participants in the current study of struggling readers and thus would measure the effectiveness of the pull-out intervention program.

“I Excelled” (IXL CARI)—a computer-adapted reading program—was used in one of the participating schools to assess participants’ learning and understanding of the lessons taught. IXL CARI is aligned with the Georgia Milestones Assessment System in English Language Arts (ELA), Mathematics, Science, and Social Studies. According to the Georgia’s State’s Core Standards, the assessment measures students’ mastery of these subjects. The validity and reliability of these assessments is known to be high and was established, for example, through reviews by education experts, test construction by content experts and psychometricians and by alignment with content standards (Georgia Department of Education, 2017). From this, it was expected that IXL CARI would be useful and valid in assessing participants’ understanding of the interventions’ lessons in the current study of struggling readers.
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Stride Academy reading program was used by other participating schools for practice on intervention lessons taught. The program assisted teachers to gauge students’ understanding of the topic or lessons. Students’ scores in the practice lessons from IXL or Stride Academy gave evidence of how students were following instructions or the lessons. IXL’s skills align with the Common Core State Standards and the District of Columbia Early Learning Standards for pre-kindergarten, providing comprehensive coverage of language arts concepts and applications.

With IXL’s state standards alignments, teachers could easily find practice questions specifically tailored to each required standard.

The reading instrument and scale employed in this research, therefore, was the Scantron Performance Series Assessments which measured students reading literacy at the beginning, middle, and end of the school year assessments. Data on participants’ reading literacy collected at these periods of assessment indicated participants’ skills in fluency, vocabulary, phonics, and phonemic awareness, comprehension (fiction and non-fiction). IXL and Stride Academy were intervention tools or practice lessons to help students gain mastery of the lessons or topics taught.

Following data collection, as specified, enumerators applied a unique code to the baseline, middle, and end of the year assessments in order to analyze students’ data while maintaining anonymity. The three questions intended to measure students’ movements through three tiers of guided instruction were evidence-based, researched-based, and designed specifically for this study. The teachers implemented an RTI (response to intervention) model to monitor resources, student performance, and progress. After completing the pull-out program and participants’ test scores were collected at middle of the year, additional quantitative data was collected (from end of the year assessment) to address the second research question: What is the impact of the pull-out program on the students’ overall literacy. Participants’ scores were based
on the Scantron Performance Series scale developed by Johnson and Smith (2011) to indicate how well the pull-out program impacted students' reading comprehension, reading fluency, decoding, phonics, vocabulary, and comprehension.

Data Analysis

Descriptive Statistics

Descriptive statistics (mean, standard deviation, range, maximum and minimum, standard error, skewness and kurtosis) were calculated for participants’ performance in Scantron Performance Series Assessments to measure their reading ability. The statistics were calculated for each period of assessment: beginning of year, middle of year, and end of year. The purpose was to summarize the data as an initial step to test hypotheses. The mean score referred to the average performance of students at each period of assessment (Rosnow & Rosenthal, 2008). The standard deviation (SD) revealed how far participants’ score was from the mean. And range showed the distance between the maximum and minimum score at each period of assessment (Gravetter & Wallnau, 2009). The standard error of the mean indicated that the mean scores came from the same population of students, showing how well the sample reflected the population from which it came while skewness and kurtosis gave a sense of normality of the data distribution (Field, 2009).

Test of Hypotheses

Following data collection and calculation of descriptive statistics, the data were analyzed using dependent sample or repeated measures t test to test hypotheses and answer the research questions. Dependent sample t test was adopted because the aim was to examine if significant mean differences would be found between participants’ performance in reading comprehension following exposure to interventions after baseline assessment. Also, dependent sample t test was
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appropriate because of the study’s limited sample size ($n = 253$). The test has ability to detect real effect even in small sample size. In addition, it minimizes or eliminates problems often associated with individual differences (Gravetter & Wallnau, 2009).

The Scantron Performance Series assessment was administered at the end of each semester, and data were collected and archived until the next assessment occurred. The Archived Scantron Performance Series test scores were calculated by the statistical package for the social sciences (SPSS) which minimized human error in reporting. The researcher collected the archived students test scores from the head or administrators of schools other than her own. For confidentiality, the researcher erased out the participating student's names on the data. The Scantron Performance Series assessment provided lists of student performance indicators, derived from national norm research using student data and a comparison to grade-level peers nationwide. “At-risk” students were those who scored below the inter-quartile range for their grade.

The researcher analyzed the Scantron Performance Series data, and eliminated any possible errors of reporting. The researcher did not teach the K-8 grades intervention students, which could possibly give a bias reporting of the data. Participants were taught by the different interventionist under the supervision of the researcher and principals of participating schools. Stride Academy training was provided by the school district’s trainer to ensure the program was used with fidelity. Participants’ scores were analyzed and interpreted as discussed below.

Summary

This chapter discussed the methodology adopted to test the research questions and answer the hypotheses to assess the effectiveness or otherwise of the pull-out interventions administered to K-8 struggling readers in Catholic schools. Students in grades K-8 were identified from
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participating schools for data collection and inclusion in the study. They were mostly immigrant students of poor social and economic background who could not read at grade level. Students that were ranked as “at-risk” during initial school-wide reading assessments were identified and placed in reading intervention pull-out classes. Participants’ tests scores were collected at the beginning of the year (baseline) and at the middle of the year and end of the year assessments for this study following a school-wide intervention that was delivered by reading specialist and title 1 teachers. Interventions were explicit and systematic and of high intensity as recommended by relevant. They were overall student-centered and geared towards rescuing participants from reading difficulties. The scores of participants in the administered test to assess their reading literacy as defined were analyzed and interpreted as discussed below.
Chapter 4: RESULTS

Descriptive Statistics

Table 1

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Range</th>
<th>Min</th>
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<th>Mean</th>
<th>Std.Error</th>
<th>SD</th>
<th>Skewness</th>
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<td>Beginning of Year</td>
<td>253</td>
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<td>68.00</td>
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<td>1.153</td>
<td>18.334</td>
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<td>-1.238</td>
</tr>
<tr>
<td>Middle of Year</td>
<td>253</td>
<td>88.00</td>
<td>4.00</td>
<td>92.00</td>
<td>44.087</td>
<td>1.191</td>
<td>18.951</td>
<td>-.128</td>
<td>-.552</td>
</tr>
<tr>
<td>End of Year</td>
<td>253</td>
<td>86.00</td>
<td>12.00</td>
<td>98.00</td>
<td>52.658</td>
<td>1.189</td>
<td>18.919</td>
<td>-.202</td>
<td>-.776</td>
</tr>
</tbody>
</table>

Note: Decimal points were rounded to 3 places

Table 1 indicates the descriptive statistics of participants’ test scores obtained at the beginning of the year, middle of the year and end of the year assessments. It illuminates students’ performance or growth in reading literacy as targeted and invariably highlights the pull-out interventions’ effectiveness. At the beginning of the year assessment, participants’ scores in reading and comprehension had a mean of $M = 35.024$ ($SD = 18.334$) with a range of 68.00-2.00. At the middle of the year, their mean scores were $M = 44.087$ ($SD = 18.951$) with a range of 92.00 – 4.00. At the final assessment, participants’ mean scores stood at $M = 52.676$ ($SD = 18.919$) with a range of 98.00 – 12.00. On average, it is noticeable from the mean scores that participants’ performance in reading showed some increase from the beginning of the year to the end of the year consequent upon pull-out interventions administered to participants. The skewness and kurtosis statistics of participants’ scores and their corresponding standard error for the three periods of assessment reveal a distribution that is negligibly different from normal. For
the beginning of year, middle of year and end of year assessments, skewness statistics for participants’ scores distribution were -.043, -.128 and -.202 respectively. In a normal distribution, the values of skewness and kurtosis should be zero (0) (Field, 2009) but in this case the values of skewness are slightly above zero (0).

To further check for normality of data distribution, since this is a basic assumption of t tests, p-p plots (probability-probability plots) were graphed. At all periods of assessment, the plots (Tables 2, 3 and 4) show that the data points do not markedly fall away from the diagonal line which ideally indicates normal distribution. Since the points do not seriously fall away from the line, the graphs show a minimal skewness that, however, permitted further analysis of data using t tests (Field, 2009).

Table 2

Baseline Assessment
Table 3

Middle of Year Assessment

![Normal P-P Plot of Middle of Year Assessment](image_url)
Table 4

*End of Year Assessment*

Paired Sample *t* tests

Paired samples or repeated-measures *t* tests were conducted to analyze data and test the hypotheses to answer the research questions whether there would be a statistically significant means difference between test scores of poor readers after pull-out interventions. Finding a statistically means difference with practical effect size would demonstrate the effectiveness of pull-out program as an instructional practice to reduce reading problems among immigrant students especially in inner city schools.

The *t* tests were conducted between “at-risk” students’ test scores in reading at beginning and middle of year assessments, and at middle of year and end of year assessments following
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pull-out interventions. Students’ test scores at beginning of the year were used as baseline. Analysis revealed the following results:

For beginning of the year and middle of the year assessments, paired sample statistics indicated the mean, the number of participating students, the standard deviation and the corresponding standard error of the means of the two conditions of assessment (Table 5). Paired samples correlations (Table 6) show a significant Pearson’s $r$ between the two periods of assessment. This, however, was not of interest in this study. In paired sample $t$ tests, it is possible for the two periods to correlate but such correlation does not necessarily indicate the effectiveness of the pull-out program because the data at both periods of assessment came from the same students and so there could be constancy of scores (Field, 2009). What demonstrates, rather, whether there was a statistically significant means difference between students’ test scores at baseline and middle of the year assessment following pull-out interventions is shown in table 7: Paired Sample Test.

The table tells us the means difference between participants’ test scores at beginning of year and middle of year assessment, $M = -9.063$. It further indicates the standard deviation of the differences between the means test scores at the two conditions of assessment, $SD = 13.531$. Thirdly, the table reports the standard error of the means differences between the test scores at the two periods of interest, std. error = .851. The $t$ statistic is given as $t = -10.654$. The degree of freedom, $df = 252$. The probability that the observed $t$ value is not as a result of chance is indicated by the value of significance (2-tailed), $p = .000$ (Table 7). This probability, less than 1%, is evidence that the observed $t$ statistic is a result of the fact that the pull-out interventions actually worked effectively to increase participants’ test scores at middle of the year assessment. The significant value, $p$, of this probability thus means that the interventions helped to improve
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participants’ reading and comprehension between beginning of the year and middle of the year assessments. The negative value of $t = -10.654$ is an indication that the mean of participants’ test scores at baseline was smaller than that of participants’ scores at middle of year assessment, revealing that the administered pull-out interventions led to a better students’ performance in reading and comprehension at middle of year assessment (Field, 2009).

A further demonstration of the effectiveness of the pull-out interventions between beginning and middle of year assessments is the 95% confidence interval, CI, for the mean difference. The table shows that zero (0) is not a probability between the lower and the upper levels of this interval (-10.739, -7.388). Consequently, the null hypothesis that there would be no statistically significant means difference between the two conditions of assessment is rejected. Since the null hypothesis is rejected, the study affirms that there is a significant effect of pull-out interventions on struggling readers’ performance in reading and comprehension measured at beginning of year and middle of year test periods and that the size of this effect, $r = .56$ is relatively large. The results show that, on average, struggling readers exposed to pull-out interventions improved their reading and comprehension scores at middle of the year ($M = 44.087, SE = 1.191$) more than their scores at beginning of the year ($M = 35.024, SE = 1.153$), $t (252) = -10.654, p < .001, r = .56$. Struggling readers who were exposed to pull-out reading and comprehension interventions scored significantly higher at middle of year assessment than they did at beginning of year assessment, thus demonstrating the interventions’ effectiveness in addressing reading and comprehension deficits among struggling readers.

The final part of the analysis compared struggling readers’ performance in reading and comprehension at middle of the year assessment with their performance at end of the year assessment after pull-out interventions. Again, the aim was to examine if a significant means
difference would be found that would indicate the usefulness of pull-out interventions as a pedagogical tool to minimize reading and comprehension deficiencies among students especially immigrants. Analysis (Table 8) reveals a means difference between these periods of assessment, $M = -8.589$ and the standard deviation of the differences between the means, $SD = 7.569$. It reports the standard error of the means, std. error = .482 and the 95% confidence interval of the means difference, CI. The interval shows that the true means difference of participants’ test scores after receiving pull-out interventions is likely to fall between -9.537 and -7.641. Furthermore, analysis indicates a $t$ statistic, $t (252) = -17.838$ that is significant at $p = .000$ (2-tailed). The significant value of the $t$ statistic is an affirmation that the administered pull-out interventions worked effectively to help “at-risks” students improve their reading and comprehension. The study, therefore, rejects the null hypothesis that there would be no effect of pull-out program on struggling readers’ reading and comprehension ability between middle of the year and end of the year assessments. Because there is a significant means difference, the study, on the contrary, affirms that exposing “at-risk” students in reading and comprehension to pull-out interventions actually led to the students performing better in reading and comprehension at the end of the year assessment ($M = 52.676$, $SE = 1.189$) than they did at the middle of the year assessment ($M = 44.087$, $SE = 1.191$), $t (252) = -17.838$, $p < .001$, $r = .75$. The large effect size, $r = .75$ means that pull-out interventions are practically useful or effective to reduce reading and comprehension deficiencies among struggling readers. Consequently, pull-out interventions are needed in schools to help students at risk of reading difficulties or disabilities improve on their reading and comprehension.

Students at risk of reading deficiencies tend to read below their grade level. Results of this study on Catholic schools demonstrate that reading interventions are effective to rescue such
students from reading failure. Findings subscribe particularly to Vaughn, Denton and Fletcher’s (2010) position that reading interventions must be intensive to achieve desired results. Interventions must provide effective instructions to at-risk students and offer them extended time for practice. For younger students, most at risk for reading failure, Vaughn and colleagues (2010) reason that high level of intensity requires that interventions be provided in small groups. In addition, they need to be given daily over a reasonable period of time, for example for about 20 -30 weeks. Furthermore, for effectiveness, intensity requires that interventions include “explicit, systematic word-level instruction, high levels of active student engagement, and practice reading-connected text” (Vaughn et al., 2010).

Providing interventions to at-risk students in small groups maximizes students’ participation and teachers’ monitoring and giving of appropriate response to students’ progress (Vaughn et al., 2010). When at-risk students, especially younger ones, are targeted in small groups, and are given extended opportunities for practice and daily feedback from teachers, they tend to acquire foundational skills such as word reading and phonemic decoding (Vaughn et al., 2010, p.434). Among 2nd graders at risk of reading failure, intensive reading intervention was found to effectively reduce reading difficulties (Vaughn et al., 2010 citing Vaughn, Linan-Thompson, Kouzakanani et al.,2003). Second grade students who were randomly assigned to groups defined as one student per teacher (1:1), three students and one teacher (3:1) and ten students with one teacher (10:1) significantly improved their reading performance in comprehension following reading intervention. The intervention was given daily at the same time for all groups. It was given at the same amount of time and for the same period of time. At the end, a significant progress was observed in participants’ reading ability. The effect size of participants’ progress was, however, found to be weaker for the group in which ten students were
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assigned to one teacher (10:1). Although the three groups yielded significant results, the effect sizes of one student with one teacher (1:1) and three students with one teacher (3:1) groups were stronger than the effect size of ten students per a teacher (10:1) group. The conclusion was that students with reading difficulties at risk of reading failure are likely to benefit more from intensive reading interventions when those interventions are given in small groups than when they are given in larger groups. In other words, intensive reading interventions tend to positively reduce the risk of reading failure but the effect is likely to be larger with small student per teacher group (Vaughn et al., 2010 citing Vaughn et al., 20003). In the current study on Catholic schools, students were grouped based on the severity of their reading problems at baseline. The groups were as follows: one student with one teacher (1:1), two students with one teacher (2:1), three students with one teacher (3:1), four students with one teacher (4:1), and five students with one teacher (5:1). Small group of students per teacher enhanced students’ involvement and teachers’ individualized attention and feedback to the students. Teachers targeted students’ identified reading deficiencies, focused on students’ progress and tracked their response to the intervention.

In addition to being given in small groups, an extended period of time is required for the effectiveness of reading interventions on struggling readers. In the present study on Catholic schools, interventions were given for a period of one academic year comprising 360 sessions. There were two sessions in every week for each grade —10 sessions per week—for a period of 9 months and each session lasted for 45 minutes. The significant outcomes of students’ progress in this study were expected due to the interventions’ intensiveness. The outcomes confirm Vaughn and colleagues’ (2010) evidence that students with serious reading difficulties will benefit more from interventions given over an extended period of time than from those of a short duration.
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High level of intensity defined, for example, as interventions given for a long time, therefore, is essential for pull-out effectiveness. The reason is probably because students with severe reading impairment may take longer time in interventions to acquire necessary skills to read at grade level.

A further recipe for effectiveness of reading interventions is that interventions must target specific areas of students’ reading needs—areas most in need of remediation. For intermediate grades, interventions may focus on multiple components of reading but for kindergarten students those that focus on one or two foundational (or pre-reading) may be most appropriate (Richards-Tutor et al., 2015). Interventions, therefore, may not just be given generally to students but must be addressed to specific areas of students’ weaknesses in reading. Teachers are first of all to clearly identify students’ reading weaknesses and adopt treatment accordingly to reverse them. A critical consideration in this regard is to use students’ baseline performance in the different aspects of reading and comprehension relative to their peers. A criterion for selection of participants in the current study on Catholic schools was that students were at risk of reading failure relative to their grade-level peers at baseline. Students with the poorest of performance (those most at risk of reading failure) were selected and grouped as explained above. Consistent with literature, they were placed in the most intensive treatment or intervention group. Research shows that placing students with the poorest of performance in a less intensive intervention group is likely to result in interventions being another ineffective, “wait and fail”, scholastic project (Vaughn et al., 2010, p.442). For all these ways to make interventions effective, high quality of principals’ leadership and teachers’ classroom instructions are needed especially in inner city schools. In collaboration with teachers, principals must pay attention to reading and comprehension needs of their students and together devise ways to address them. Students at risk
of reading failure need to be identified as early as possible in the school year and assisted to overcome their reading problems through intensive reading interventions.

Students with reading difficulties demonstrate reading gains when they receive extensive and explicit instructions in foundations skills and in higher reading tasks (National Reading Panel, 2000). This suggests that grounding students, for example, in phonological awareness and phonics and in word meaning and understanding of text could reduce incidence of struggling reading among students. Wanzek and Roberts (2012) tested this assumption among fourth graders with reading impairments. The objective was to examine if statistically significant differences would be found in students’ reading gains within three reading interventions groups and relative to a comparison group. Participants were randomly assigned to four study conditions (with different instructional emphases) following a pretest to identify areas of reading weaknesses. The conditions were: (a) word recognition, (b) comprehension, (c) responsive emphasis, and (d) comparison. Students in the treatment groups (a, b, and c) received interventions by a teacher hired and trained by the research team whereas those in the comparison group received the regular school-provided interventions—they did not receive research-provided interventions. In all, interventions consisted in word recognition instructions, vocabulary, and comprehension. They were given in small groups of 2 to 4 students per teacher every day for 30 minutes throughout the school year that lasted for 28 weeks. Each participant attended sessions ranging from 85 to 114. At the end, posttest data of all groups were analyzed.

Analysis revealed no statistically significant differences in reading gains in all the study conditions. Thus, students who received reading interventions emphasizing comprehension, for example, did not significantly improve in comprehension better than those who received interventions emphasizing word recognition. No reliable differences were noted between the
study conditions as defined. In addition, there were no statistically significant differences between the treatment groups and the comparison group. Fourth graders who received the research-provided interventions (treatment group) demonstrated similar reading outcomes to those who received school-provided interventions (comparison group). Reading gains were noted in all the study conditions but none was statistically significant. The students were still struggling in the targeted areas of reading. The authors concluded that, for upper grade students with reading impairments, a more intensive and rigorous interventions (lasting through many school years and sessions) may be needed to significantly remedy the deficiencies (Wanzek & Roberts, 2012).

The uniqueness of the current study on the effectiveness of pull-out interventions on struggling readers in Catholic schools was that data came from K-8 grades. Findings of statistically significant results in this study could be due to the study sample being drawn from K-8 grades, the quality of teachers, and the quality of the whole interventions’ process. Instructional emphasis in this study sought to address reading comprehension deficits. The areas of concentration were on skills such as fluency, decoding, word recognition, vocabulary, and reading motivation. Future research on the effectiveness of pull-out interventions in Catholic schools could consider focusing specifically on younger students and specifically on those from fourth grade upward. However, in all groups, intervention’s intensity, as earlier defined, could be the key to significant intervention efforts to reduce severe reading impairments among struggling readers.

In a meta-analyses of twelve experimental studies published between 2000 to 2012, Richards-Tutor and colleagues (2015) did not find significant effects of moderating variables on reading interventions for struggling readers or those identified as students with learning
disabilities. The moderating variables included group size, minutes of interventions, and personnel delivering interventions. The analyses, however, revealed significant effects (of moderate to large sizes) of interventions targeting beginning reading skills among kindergarten and first grade (Hedges’ $g = 0.58-.91$) and those targeting reading or listening comprehension (Hedges’ $g = 0.47 -2.34$). The interventions’ characteristics, indicating intensity, included group size, duration, quality of the personnel delivering intervention and amount of training personnel received. Other characteristics were contents and techniques of interventions’ delivery, and information on the control or comparison group (Richards-Tutor et al., 2015). The group sizes vary from one-on-one tutoring to three to five or eight students per group. At most, interventions were given for 30 to 60 minutes except for kindergarten groups which lasted between 10 to 20 minutes per session. The duration included daily interventions, and those given twice in a week to four times in a week. The personnel delivering interventions were normal classroom teachers, special education teachers, teachers trained in bilingual education, hired teachers, and paraprofessionals. In addition, research assistants, undergraduate and graduate students were used. In all cases, the personnel were trained on intervention delivery; supervised and given feedback (Richards-Tutor et al., 2015).

Pertaining to contents, interventions focused on phonemic awareness, phonics, fluency, vocabulary, and comprehension. Those targeting kindergarten in general concentrated on phonological awareness (PA) while those targeting intermediary grades focused on fluency and comprehension. Intervention methods were systematic and explicit and they included modelling, scaffolding, and corrective feedback. The control group received interventions that markedly distinguished them from the treatment group (Richards-Tutor et al., 2015).
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Analyses following interventions demonstrated results as earlier reported. There were moderate to large effects of interventions targeting kindergarten and first grades and those targeting intermediate grades. The moderating variables (group size, minutes per session, and type of personnel delivering intervention), however, did not influence outcomes (Richards-Tutor et al., 2015). Moderating variables such as group size, duration, time per session, generally, are relevant because they measure intensity which significantly increases chances of interventions’ effectiveness (Wanzek & Roberts, 2012). However, in the meta-analyses, the variables did not influence outcomes probably because of their large variation across interventions (Richards-Tutor et al., 2015). Researchers (e.g. Baker & Kosty, 2012) have reported that interventions of small groups of three to five students might be more effective in addressing reading difficulties than those in groups of six or more students. Despite reasons that small intervention groups offer students more opportunity to practice reading skills and proficiency than large groups, the meta-analyses did not demonstrate consistent significant effects of the group sizes on outcomes (Richards-Tutor., 2015). Like group size, instruction time (minutes per session) did not moderate interventions’ effectiveness. The lack of effect was potentially due to interventions lasting as long as the instructions given to the comparison group. Also, the lack of effect was attributable to the fact that shorter interventions focusing on multiple components of reading tend to yield mixed results from those focusing on just one or two components. Due to this lack of consistent significant effect of intervention time on reading difficulties especially among older students, the authors recommend that older students with severe reading difficulties may need longer and more intensive interventions than younger students (Richards-Tutor., 2015).

Consistent with Wanzek and Roberts’ (2012) results, the meta-analyses did not reveal significant differences between interventions provided by the researcher and those provided by
normal, classroom teachers. Therefore, interventions’ effectiveness does not depend on the person of the provider. As demonstrated in the current study on Catholic schools, interventions can effectively reduce reading difficulties among students provided that those administering them are well trained. School-based teachers or research-based personnel can do the job with the same effects provided they are well trained and equipped to do so (Richards-Tutor., 2015). In administering interventions, personnel must be trained to be explicit and systematic. Teachers or researcher-based personnel must model, demonstrate, guide practice, give feedback and offer students opportunities to practice on their own. Where there are control groups, personnel must have adequate information about the groups’ characteristics because the characteristics can confound results (Richards-Tutor et al., 2015).

The study of the effectiveness of reading interventions for struggling readers in grades K-8 in Catholic schools yielded effects of moderate to large sizes on students’ reading and comprehension at middle of the year assessment ($r = .56$) and at end of the year assessment ($r = .75$). Findings of these large practical effects of the pull-out interventions on the reading and comprehension ability of participants in this study support Richards-Tutor et al. (2015) evidence that interventions on reading skills must produce moderate to large effects on reading. Findings underscore that given needed extra attention, for example by way of pull-out interventions, struggling readers can acquire more skills to improve their reading and comprehension. Thus, students who are at risk of reading failure can be rescued from reading failure. The results further indicate that effective pull-out reading interventions can be a solution to reduce or narrow the pervasive reading and achievement gaps noticeable between various student groups (Schwartz, 2001).
Intensive reading interventions can reduce persistent and severe reading difficulties among students (Denton et al., 2006). In a sample of students, some of whom had previously received Tiers 1-2 reading instructions, intensive interventions led to significant growth in reading. The interventions were explicit and systematic, lasting for 16 weeks. And their focus was on decoding and comprehension, fluent reading of words and of texts. Overall, the interventions led to significant improvement in students’ standard scores. In particular, it was noticeable that, following the interventions, students who remained impaired after receiving Tiers 1 and 2 interventions demonstrated stronger growth than those who previously had only received Tier 1 interventions or special education instructions. The conclusion was that intensive Tier 3 reading interventions can accelerate students’ improvement in reading and consequently serve to reduce reading achievement gap (Denton et al., 2006). The lesson here is that teachers and principals must accurately identify students with reading difficulties and accordingly administer interventions. Interventions must match the severity of the reading difficulties.

According to Scammacca et al. (2016), the number of older students (grades 4-12) diagnosed with reading deficiencies are increasing thereby, raising the need for accessing and developing effective interventions for struggling readers. The results of the present study on the effectiveness of pull-out programs for struggling readers in grades K-8 in Catholic schools confirm that need. The results have demonstrated that pull-out interventions can support older students struggling with reading to acquire more reading and comprehension skills. They can act as a factor, among many others, to remedy reading deficiencies in students. The point of the present study on Catholic schools is that in addition to all other efforts that can be employed to tackle reading difficulties especially among immigrant students, pull-out programs could be considered as one.
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Effective pull-out programs in schools are a social justice concern about good education for all students. The result of strong positive relationships between reading ability and pull-out interventions in this study supports the case that every child, regardless of socioeconomic status, deserves quality instruction and supportive interventions that could be critical in closing achievement gap (Schwartz, 2001). It supports the case that every child can succeed. It supports the case that school principals and administrators especially in urban areas must make reading and achievement of immigrant English learners their concern since this population still lag behind other students’ performance (Everson & Bussey, 2013). Instead of simply advocating for academic standards and stringent assessment strategies, policy makers need also to focus on closing achievement gap between students of color and their white counterparts. This study on effectiveness of pull-out programs has demonstrated that pull-out interventions can serve that purpose. Pull-out interventions can have transformative effects on students’ reading and comprehension ability especially in high-poverty schools.

According to Freire (1970, 2000), schools should look like the students and community they serve and not be run like business centers. Therefore, the interest of poor students performing below their grade level in reading should not be overlooked. Schools in high-poverty areas need to develop ways and methods of responding critically to academic needs of all students especially those who struggle in reading. They need to provide resources and create positive learning environments for students of immigrant background to develop their reading and comprehension skills. Findings of statistically significant effects of pull-out interventions in the present study on Catholic schools have shown that schools can create context for self-actualization of struggling readers (Akbari, 2008). Findings have underscored struggling readers’ need for quality instructions in reading literacy. The study has demonstrated that
struggling readers are not finished products but that they can be improved upon. It has provided additional tool for professional development of teachers and instructional enhancement in schools. And it is hoped that the study will raise public awareness and challenge school districts to learn and encourage effective ways of address reading needs of immigrant students.

**Table 5**

*Paired Sample Statistics*

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
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<td>18.334</td>
<td>1.153</td>
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<tr>
<td>Assessment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle of Year</td>
<td>44.087</td>
<td>253</td>
<td>18.951</td>
<td>1.191</td>
</tr>
<tr>
<td>Assessment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Decimal points were rounded to 3 places*

**Table 6**

*Paired Sample Correlations*

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<th>Correlations</th>
<th>Sig</th>
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<td>Beginning of Year Assessment &amp; Middle of Year Assessment</td>
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<td>.737</td>
<td>.000</td>
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### Table 7

**Paired Samples Test (Paired Differences)**

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<th>SD</th>
<th>Std. Error</th>
<th>95% CI</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment – Middle of Year</td>
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<td>13.531</td>
<td>.851</td>
<td>-10.739, -7.389</td>
<td>-10.645</td>
<td>252</td>
<td>.000</td>
</tr>
</tbody>
</table>

**Note:** \( p < .001 \)

Decimal points were rounded to 3 places

### Table 8

**Paired Sample Test (Paired Differences)**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Std. Error</th>
<th>95% CI</th>
<th>t</th>
<th>df</th>
<th>Sig.(2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle of Year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment – End of Year</td>
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<td>7.659</td>
<td>.482</td>
<td>-9.537, -7.641</td>
<td>-17.838</td>
<td>252</td>
<td>.000</td>
</tr>
</tbody>
</table>

**Note:** \( p < .001 \)

Decimal points rounded to 3 places
Chapter 5: Summary, Conclusions, and Recommendations for Future Research

Summary

Reading interventions to reduce struggling reading are needed in schools especially those with high percentage of immigrant students who often tend to be English learners. According to the National Center for Educational Statistics (2014), English Learners generally perform significantly below proficiency on reading assessments compared to native English speakers. Therefore, instructional interventions are needed to boost academic progress and English proficiency abilities of non-native English speakers. Interventions are needed considering the yawning achievement gap existing between these groups (Reardon & Claudio, 2009), and also because English learners continue to be the fastest-growing student population in U.S. schools (U.S Department of Education, 2011).

The current research on the effectiveness of pull-out reading interventions in Catholic schools is an attempt to address the need of struggling readers especially those of immigrant status. The purpose was to examine the effectiveness of pull-out interventions on K-8 grade students who were at risk of reading difficulties. The study emphasizes the critical role of reading interventions in preventing or reducing reading impairments among this group of students. It reduces reading difficulties in grades K upwards because students who fail to read adequately in kindergarten or primary grades typically experience reading difficulties throughout their school years (Denton et al., 2006 citing Torgersen & Borges, 1998).

K-8 grades students in Catholic schools were given a one-year intervention to determine if there would be a significant growth in their performance in reading and comprehension following a pretest assessment. Data (i.e. students’ tests scores) were collected at the beginning, middle, and end of the year assessments. The test scores were recorded and analyzed at the end
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of the 9 months’ period of interventions. SPSS software was used to compute the progress of the students. The findings were that students’ performance in reading and comprehension showed significant increase from the beginning of the year to the end of the year after students received pull-out interventions. The study revealed that the pull-out interventions effectively served to improve students’ reading and comprehension skills since there was a significant improvement of students’ performance from beginning of year to end of the year assessments. Highlighting the effectiveness of pull-out interventions, the study offers suggestions that could reduce the number of students for special education since in many cases struggling readers are typically placed in special education (Donovan & Cross, 2002).

The results of significant relationships between pull-out interventions and students’ performance in reading and comprehension as reported in this study on Catholic schools are consistent with Crosnoe’s (2013) evidence that reading comprehension skills and positive classroom environments in schools have positive impacts on students’ academic outcomes, controlling for students’ socioeconomic or immigrant backgrounds, living in urban areas, or reading below grade level. The results further confirm that students with reading difficulties can benefit significantly from reading interventions especially in their early years (Jenkins & O’Connor, 2002 cited in Wanzek & Roberts, 2012).

According to Gersten and colleagues (2009), intensive interventions, covering Tier 2 and Tier 3, are particularly recommended for students most at risk of reading difficulties and disabilities. With severe reading impairment and consequent risk for academic failures, Vaughn et al. (2010) maintain that students may need direct placement in Tier 3 interventions without passing through those of low intensity (i.e. Tiers 1 and 2). The reason is that students who fail to read at their grade level tend to experience accelerated growth when they receive instructions.
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that are more effective and when they are given extended opportunities for practice (Vaughn et al., 2010, p.441). Tier 3 interventions are interventions of high intensity. Group size, number of sessions, and duration predict interventions’ effectiveness. Therefore, in designing interventions for struggling readers, schools must pay attention to interventions’ group size, number of sessions, and duration. In addition, interventions must include explicit, systematic word-level instruction. They must emphasize active student engagement, and practice reading-connected text. All this influence intensity, and consequently effectiveness of reading interventions especially for younger students. For older students experiencing reading difficulties, interventions of high intensity are needed but may be given over a longer period of time (Vaughn et al., 2010).

Brooks-Yip & Koonce, (2010) maintain that many children struggle to read, and such difficulties can persist into adulthood. Without a dramatic reversal of such impairment, the difficulties could lead to educational failure with concomitant social and economic effects in the future. They could further expand achievement and poverty gaps between social groups. The study of effectiveness of pull-out reading interventions in Catholic schools was undertaken to assess if pull-out interventions can be effective in improving students’ reading and, therefore, reverse the trend. Consistent with previous research, the study has demonstrated that giving students explicit instructions in comprehension can be beneficial to students who lack fluency and ability to read multisyllabic words (Archer et al., 2003; Sollis et al., 2012). It is important to improve fluency because fluency increases reading rates while accuracy improves reading comprehension (Allinder et al., 2012). In order for comprehension to increase, students need to have accurate oral reading fluency and understanding of text. This research on Catholic schools was designed to investigate the effectiveness of pull-out interventions on K-8 grade students’
comprehension and oral reading fluency rates. By finding statistically significant mean differences in student’s reading and comprehension growth following interventions, the research has demonstrated that pull-out interventions are necessary for increasing reading and comprehension rates among struggling readers irrespective of their socio-economic status. Since more instructions tend to improve students’ academic performance, the research was designed to develop and articulate an action plan for more attainable instructional strategies that can promote learning for struggling readers of immigrant and low socioeconomic backgrounds.

**Significance of Study**

Few studies have been conducted to assess and describe the effectiveness of interventions on struggling readers and English as second language students (Dussling, 2017). The present study on Catholic schools is a significant contribution to available and published research in this area. The study acts as a model for teachers who struggle to understand the diversity of immigrant student populations they instruct and respond accordingly to their reading and comprehension difficulties. The study raises awareness and challenges teachers, principals and educational administrators to learn how to address reading and comprehension needs of immigrant students in their schools and districts. The research highlights that given adequate support; immigrant students could reduce their struggle or deficiency in reading and comprehension. The study is important for principals and teachers who, as change agents, are interested in creating change for students of immigrant or poor socioeconomic status.

The significance of the current study of pull-out effectiveness consists further in its focus on grades as early as kindergarten. The study included kindergarten not only because pupils in kindergarten are still within the critical age of language acquisition but also because identifying and intervening with poor readers early is critical (Lipka & Siegel, 2010). It is the author’s
position that intervening as early as in kindergarten years could build a strong foundation for better reading and comprehension skills in subsequent grades.

This study has the potential of contributing to the field of research. First, there are few studies on the relationship between the assessment of pull-out programs, Scantron Performance Series Lexile levels, and decoding reading comprehension fluency for at-risk readers. Many pull-out programs focus mainly on oral reading fluency and not on decoding comprehension texts. This dissertation addresses several critical areas of reading literacy, such as decoding, fluency, vocabulary, and reading comprehension for K-8 immigrant and low-income students. It has demonstrated pull-out interventions’ effectiveness in combating reading deficiencies in students.

Past research (e.g. Pennington, 2009) found that reading intervention programs should contain several components that will help students to become successful. One of such components is that the intervention must be researched-based and proven to work for struggling readers. The current research on Catholic schools has validated past research by statistically demonstrating the effectiveness of pull-out interventions on struggling readers.

Findings have implications for social justice and education. They are significant to the field of literacy education for those interested in creating social change for immigrant students and students of low social and economic background. Many elementary schools’ immigrants who are second language learners are at-risk readers and have many factors that are against them. For such students, results of this study have revealed that effective pull-out interventions are necessary to push them to become grade level readers. Additionally, results point to the fact that change can begin to happen in students who struggle in reading if teachers are sensitive to such students’ needs and learn fast to identify the students who need reading interventions and
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those who need a special education plan. Targeting students with effective pull-out programs early could decrease the number of students who are in special education before high school.
The results obtained from this study can be useful for further action with struggling readers. It is necessary to help readers who have reading difficulties and interventions are required for this purpose even in early literacy. If students’ inability to read at grade level is not fully addressed at early stage, the problem could fester into a reading crisis at colleges (Brothen, & Wambach, 2004), hence the relevance of this study on the effectiveness of pull-out interventions on struggling readers.

Limitations and Recommendations for Future Research

This study was conducted to assess the impact of pull-out reading interventions on comprehension and oral reading literacy of K-8 grades students in Catholic schools. Although the study revealed significant effect of reading interventions on the students’ comprehension and reading literacy, it still has some limitations. The treatment interventions were given alongside classroom instructions. Participants received the researcher-provided interventions together with the normal school-provided (homeroom) instructions. Therefore, findings of statistically significant results in participants’ reading and comprehension performance in this study could be explained as the effect of participants receiving both the researcher-provided interventions and the school-provided normal instructions. The noticeable growth in participants’ reading and comprehension ability from beginning to the end of the school year may be the result of the combination of both efforts to reduce participants’ reading deficits.

Future research could consider a quasi-experimental design that includes a comparison group. In such design, the comparison group could receive normal school instructions while the treatment group receives both the school instruction and the researcher-provided treatment
THE EFFECTIVENESS OF PULL-OUT PROGRAMS FOR STRUGGLING READERS IN GRADES K-8

interventions. Furthermore, a quasi-experimental design focusing on English learners and native English speakers experiencing reading difficulties could be considered. In such design, native English speakers could serve as control or comparison group. In all samples (English learners or native English speakers), future research needs to take into consideration individual differences between participants so as to effectively delineate interventions’ effectiveness. The reason is that participants’ individual differences such as academic achievement, language proficiency, and socio-economic status could confound interventions’ effectiveness. Control of these differences is recommended.

New research in this area also is needed to explicitly help teachers and schools estimate time, duration, and group size that are most suitable for interventions’ effectiveness on struggling readers. Such research will be a welcomed development since these characteristics (time, duration, group size) influence the level of intensity and, consequently, the effectiveness of interventions. Currently, research lacks precision on intervention time, duration, and group size.

Qualification and training of intervention providers are other areas worthy of emphasis in future research and practice. For this reason, professional development specially designed and tailored towards reducing reading difficulties among students are needed in schools. Trained intervention teachers are needed. Schools must invest in professional development of teachers and equip teachers with tools and expertise necessary to combat reading deficiencies among students especially those at risk of reading disabilities.

The current study on Catholic schools is limited in that the research was limited to Archdiocesan Catholic Schools in the northwest and southeast quadrants of the District of Columbia in the United States education setting. New research could consider targeting both
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public and private schools specially to determine if pull-out interventions would differently influence students reading ability in public and private schools, and why? It would be intriguing to see if the study would reveal different results when analyzing a different population.

Research using longitudinal data is recommended for more understanding of the effectiveness of pull-out interventions on reading and comprehension of struggling readers in schools. The researcher could consider conducting the study and following participants for longer duration to determine if comprehension and reading rates would significantly change following pull-out interventions. The results of an expanded study could help to determine if “I Excelled” or any intervention resource program can have long-term positive effects on reading ability of at-risk students.

The possibility of obtaining outcomes due to history, maturation, and order effects (and not necessarily due to the pull-out interventions) is potentially a limitation of the current study on Catholic schools. As repeated measures were used in analyzing data, it is likely that the observed increase in participants’ reading ability, following interventions, could be the effect of participants getting mature as students from the beginning of the year to the end of the year and not just the effect of the pull-out interventions. Thus, a threat to the validity of the observed outcome could be cyclical maturation and history effect. Because students’ performance were measured at different intervals of the school year (beginning, middle, end), differences in their performances might be related to time or period-of–the year difference rather than to the pull-out program. Differences might also be due to historical events (Shadish, Cook & Campbell, 2002).
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Future research focusing on Catholic High Schools students reading below grade level is recommended since some students do struggle in reading even in grades 9-12 (Al Otaiba et al., 2014).

Conclusion

Despite these potential weaknesses, the current research on Catholic schools is a significant contribution to available literature on reducing reading difficulties especially among immigrant students who are English learners. The study is significant because the population of immigrant students may continue to grow especially in poor neighborhood schools. Since these students may largely be English learners, and may be of low socio-economic status, they may suffer reading difficulties with attendant negative effects on achievement relative to other students. Schools, therefore, need necessary tools to help such students improve their reading. And the present study on the effectiveness of reading interventions on struggling readers provides one of such tools. It is imperative that struggling readers be identified and given reading interventions early in their education and accompanied through their secondary education level if the difficulty persists. As Torgesen (2006) observes, “we will never teach all our students to read if we do not teach our students who have the greatest difficulties to read” (p.1). School-level identification of “at-risk” students and school-level interventions for reading are needed in schools for struggling readers. Immigrant students face many challenges from a social, civic, spiritual, and educational standpoint here in the United States. Therefore, schools need to explore means of helping them integrate and learn effectively. Schools are to put literacy at the forefront of educational programs targeting immigrant students. Teachers have a sacred and civic duty to teach students and should not ignore those struggling in reading. Paying attention to students’ reading ability is critical because if students are not successful at reading,
they may fall behind in other subjects. This quantitative study on the effectiveness of reading interventions for struggling readers in grades K-8 was designed to explore a means through which teachers may effectively influence struggling readers towards reading proficiency. The study has demonstrated that pull-out interventions can significantly facilitate increase in students’ reading ability and consequently needs consideration especially in teaching immigrant students who are at risk of reading difficulties or reading ability.
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APPENDIX A

LETTER TO SUPERINTENDENTS

May 28, 2019

Gloria Agumagu, HHCJ
Saint Augustine Catholic School
2021 V. NW Washington DC, 20009

Superintendent for Catholic Schools
Archdiocese of Washington
5001 Eastern Avenue, Hyattsville, Maryland 20782

Dear Mr. …………..,

Greetings! My name is Gloria Agumagu. I’m the principal of St. Augustine School. I wish to request for your permission to use students’ existing test scores after each pull-out interventions are administered at the beginning, middle and end of the year assessments. I am in the process of preparing my IRB application through Duquesne University and would like to include your permission letter with my IRB packet to collect data for a dissertation I am completing at Duquesne University. The objective of this dissertation is to investigate the effectiveness of pull-out programs for struggling readers in grades K-8. The data that the researcher intends to use will be existing test scores in reading comprehension administered to some identifiable struggling readers in our schools and their performance on daily pull-out interventions. These data will be de-identified by the school Counselor, and the vice principal before being given to me and will be treated anonymously from targeted elementary schools in the archdiocese without the schools’ or students’ name being disclosed. And I plan, at the end of the study, to inform you of the result and its significance or implications for tackling reading problem among students of low-socio
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economic background in our schools. If you have concerns regarding my study, you may contact me at [redacted] or use my email: sistergloria@saintaugustine-dc.org. You may also contact Dr. Gibbs Kanyongo, the chair of my dissertation committee (kanyongog@duq.edu) Thank you for your attention. I look forward to hearing from you soon.

Respectfully,

Gloria Agumagu HHCJ
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APPENDIX B

LETTER TO PRINCIPALS

July 12, 2019

Gloria Agumagu, HHCJ,
Saint Augustine Catholic School
2021 V. NW Washington DC, 20009

Dear Mr……………………………,

Greetings! My name is Gloria Agumagu. I serve as the principal of St Augustine Catholic School. I am writing to request your assistance with collection of data for a dissertation that I am completing at Duquesne University. Mr. Bill Ryan, the superintendent of schools in the archdiocese has approved this study as the attached letter shows. The purpose of this dissertation is to investigate the effectiveness of pull-out programs for struggling readers in grades K-8 in our schools. Its objective is to examine some interventions that teachers can use in our schools to reduce problems in reading and overall literacy ability, especially among immigrant and low-income students. The attached IRB indicates that Duquesne University has approved of this study. The data that I intend to collect will be test scores in comprehension of some identifiable struggling readers in your school and their performance on daily pull-out interventions that will be administered to them. These data will be collected anonymously by me without your schools’ or students’ name being disclosed. At the end of the study, I intend to inform you of the result and its significance or implications for tackling reading problems among students of low-socio economic background in our schools. If you have concerns regarding my study, you may contact me at [redacted] or use my email: sistergloria@saintaugustine-dc.org. You may also contact Dr Gibbs Kanyongo, the chair of my dissertation committee (kanyongog@duq.edu) or members of
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my dissertation committee: Dr. Lisa Levers at (leversl@duq.edu) or Dr. Army Olson at (olsona@duq.edu). Thank you for your attention.

Respectfully

Gloria Agumagu HHCJ
THE EFFECTIVENESS OF PULL-OUT PROGRAMS FOR STRUGGLING READERS IN GRADES K-8

APPENDIX C

IRB REPORT OF ACTION

Protocol ID 2019/07/14
PI Gloria Agumagu
PI Type Student
Faculty Advisor Gibbs Kanyongo 07/25/2019
Faculty Advisor Acceptance Status Accepted
Department School of Education
PI Institution
Co-PI’s
External PIs
Exempt Reviews David Delmonico / Completed / 07/28/2019 10:38 AM EDT
Review Type Exemption
Approval Status Exemption Verified
Based on (1) Educational Research
Submitted By Gloria Agumagu
Date Received 07/25/2019
Date of Completion 08/18/2019
Date Approved 08/18/2019
Approval Expires Approved Without Cont. Review
Proposed Start Date 07/25/2019
End Date 03/31/2020
Date Closed
Funding Source
IRB Review Fee
Subjects • Subjects under age 18
Investigator School • School of Education
Pre-Protocol Questionnaire 07/25/2019
Pre-Protocol Questionnaire.pdf (Pre-Protocol Survey)
Reviewer Notes 08/18/2019
Exempt Reviews Review Notes.pdf (Reviewer Notes)
Notifications 07/30/2019
08/01/2019
08/18/2019
Exemption Notification - IRB ID: 2019/07/14.pdf (Notifications)
Protocol Description 07/25/2019
Protocol Summary Form_7-25-19.docx (Protocol Description)
Additional Appendices 07/25/2019
Permission Letter 7-25-19.pdf (Additional Appendices)
07/25/2019

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Approved letter from the Superintendent 7-25-19.pdf  (Additional Appendices)  08/07/2019

Protocol Summary Form- 8-7-19.docx  (Revised Protocol)

Revised Protocol