Which Techniques can be Used to Help Struggling Kindergarten Students Retain Phonics in a Title I School?

by

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Table of Contents

List of Figures                                            i
Abstract                                                   ii
I. Introduction                                            1
  Statement of the Problem                                  1
  Statement of Research Hypothesis                          1
  Operational Definitions                                   2
II. Literature Review                                       3
  The Role of Phonemic Awareness in Reading                 3
  Daily Intervention within the Kindergarten Classroom      5
  The Relationship between Low Socioeconomic Status and    6
    Student Academic Achievement                            6
  What can be Done to Help Student Progress                 8
III. Methods                                                10
  Design                                                    10
  Participants                                              10
  Instrument                                                10
  Procedure                                                 11
IV. Results                                                 13
V. Discussion                                               18
List of Figures

1. Performance on First Sound Fluency 13
2. Letter Name Fluency 14
3. Phoneme Segmentation Fluency 15
4. Nonsense Word Fluency 16
Abstract

The purpose of this study is to determine whether daily intervention through learning in small groups, one-on-one intervention, and smart board technology impacts kindergarten students’ ability to retain phonics. This was a modified case study which used a single group of students who were not randomly selected. The participants of this study were three kindergarten students enrolled in a Title I school located in Washington, D.C. The participants were given daily group instruction, smart board technology, and one-on-one instruction with flash cards to help further their progress. Considering that this is a modified case study with only three students, no hypothesis was needed. The data uncovered that students showed an increase in performance on first sound fluency, letter name fluency, phoneme segmentation fluency, and nonsense word fluency when the pretest and posttest data were compared.
CHAPTER I

INTRODUCTION

Overview

Too often many children begin school unprepared. Students aren’t coming to school with the skills needed to succeed in the kindergarten classroom. These years are crucial to the development of the child because they set the foundation for students’ success in future grades. Research has shown that phonics intervention within the kindergarten classroom can be beneficial for the struggling student. Daily intervention can aid students in providing additional help in areas where they are falling behind. A few of these techniques include daily reading, sounding out letters, smart board activities, and one-on-one intervention.

Research has also shown that socioeconomic status and parental involvement have a hand in student success and development. Student progress can suffer when parental involvement is low. As a social unit, the family defines expectations of a learner while mediating the influences of school, culture, and language (Panferov, 2010). In addition, research has shown that students who come from poor families or families who know very little English tend to have a harder time making progress in the kindergarten classroom. Students who share these characteristics make up a majority of the population at many Title I schools. Thus, this study was created to identify which techniques can be used to help struggling kindergarten students retain phonics in a Title I school.

Statement of Problem

The purpose of this study was to determine which techniques can be used to help struggling kindergarten students retain phonics in a Title I school.

Hypothesis
This was a modified case study with only three participants, and thus statistical testing and the hypothesis will not be present.

**Operational Definitions**

*Struggling kindergarten students* are students who are not “kindergarten ready” or students who perform below academic level. These students include but are not limited to students who cannot write or recognize their name in print and identify some letters or letter sounds.

*A Title I school* is a school that has a high number or percentage of low-income families. These schools receive federal funds to help low-income students have a fair education. The Title I school is defined by the number of students who receive free and reduced lunch.

The *family environment* is the immediate surroundings that a child is living in. This may include people who live under the same roof as well as the area or living conditions within a household.

*Literacy* is the ability to read and write.

*Socioeconomic status* is the total measure of a family’s income, education, and occupation in comparison to the highs and lows of society.

*Phonics* is the connection of sounds to letters or sounds to groups of letters in the alphabet.
CHAPTER II

REVIEW OF THE LITERATURE

Many students in Title I Schools are not coming to school prepared for kindergarten. Teachers are practically beginning from scratch, having to teach students how to correctly identify letters, letter sounds, and to write their names. Typically, children who live in poverty, including many from minority backgrounds, have impoverished language skills and fewer home literacy experiences than students from middle and higher socioeconomic backgrounds (Al Otaiba et al., 2010). The purpose of this study is to determine which techniques can be used to help struggling kindergarten students retain phonics in a Title I school.

The first section of this review of the literature will focus on the role of phonemic awareness in reading. The second section will discuss daily intervention within the kindergarten classroom. The third section will go into the relationship between low socioeconomic status and academic student achievement. Finally, the last section will examine what can be done to help student progress.

The Role of Phonemic Awareness in Reading

Phonemic awareness is the key to learning how to read and write fluently. For kindergarten students, it is essential that they begin using phonics to identify sounds and symbols. Children who have phonemic awareness are able to segment (break apart) a word into phonemes in order to write the word and to blend (put together) phonemes in order to read a word (Chapman, 2003). Children with phonemic awareness and who also have some knowledge of letter-sound relationships are able to come up with an approximate spelling of a word (an invented spelling) or an approximate pronunciation, which must be checked with context and meaning cues in order to make sense of what is being read (Chapman, 2003). Phonemic
awareness should be the precursor to all learning in kindergarten literacy.

Teachers can help to promote growth in phonemic awareness. Teachers can help students’ progress in this area though small groups or one-on-one teaching. Teachers can also identify phonics while teaching other subjects within the classroom. This will encourage all day learning and strengthen knowledge of letters and sounds. Students in classrooms where skills were taught in the context of reading and writing typically make substantially greater advances in a variety of literacy related skills, strategies, behaviors, and attitudes (Chapman, 2003). Chapman (2003) also notes that phonological awareness instruction must involve the sound system with countless opportunities to hear stories, to repeat phrases, to invent similar sounding patterns, and to play with sounds in a manner that focuses children's awareness of the language upon syllables and phonemes.

Another way for teachers to promote growth in phonemic awareness is to incorporate music, movement, and games within the classroom. Learning songs and dances is an excellent way to help five- and six-year-olds learn. Games that focus on beginning sounds, ending sounds, rhyming words, spelling, vowels, and initial letter sounds are useful tools in gaining phonemic awareness. Classroom activities for young children must be captivating enough to hold the imagination, engaging enough to sustain active involvement for a period of time, and stimulating enough to motivate further literacy exploration. Activities that are meaningful to children help them make connections to real reading and writing (Chapman, 2003).

There are many strategies that can be used to test student knowledge. Teachers can begin the school year by assessing students’ word and letter knowledge after the first six weeks of school. This will assess what they already know. A second test can be done in the middle of the school year to determine progress. There can be a final test at the end of the school year to
determine growth.

A second assessment strategy would be to assess student writing. The teacher selects a sentence written by a child near the beginning of the school year (for example, in a journal) and dictates this sentence back to the child several times during the school year to document the child's progress and emerging literacy knowledge (Chapman, 2003).

Blending and segmenting can be used to strengthen phonemic awareness. Blending and segmenting are the most sophisticated phonemic skills and the most important for application to decoding (Lane & Pullen, 2015). Students who are poor spellers are often poor readers. If students are capable of identifying correct letter sounds and blends within a word early on, they are more likely to become successful readers. According to the stage theory of spelling development, students progress from preliterate to alphabetic spellers as they master letter-sound correspondence (Al Otaiba et al., 2010).

**Daily Intervention within the Kindergarten Classroom**

Students are not coming to school with the skills needed to be successful learners. There is no exact definition of what being “kindergarten ready” is. Behaviors associated with kindergarten readiness include following rules and routines, taking turns, and communicating personal needs and feelings (Hatcher, Nuner, & Paulsel, 2012). Students with reading difficulties cannot easily make the connection between sounds of our language and their printed counterparts. Consequently, they face considerable obstacles translating print to speech and fail to develop ease and facility with word recognition, which limits their capacity for higher level cognitive processes related to comprehension and, ultimately, the word and world knowledge they gain from reading (Simmons et al., 2007).

It is important to have early intervention in the kindergarten classroom. MacDonald and
Figuero (2010) explain that early intervention is critical, and the window of opportunity closes quickly. If a teacher decides to wait until first or second grade to intervene, it may already be too late. Students need continuous repetition and support to ensure their growth. Given that the kindergarten years are a critical period of growth for students' emergent-literacy, oral language interventions placed during the course of the kindergarten school year give students an additional source of support at a critical time in their development (MacDonald & Figueredo, 2010).

Tutoring programs can also be implemented for students who need help. Like a typical kindergarten schedule, school readiness sessions have a highly structured, consistent routine with many transitions between activities (Pears et al., 2014). This is beneficial in helping students remain in a setting that is similar to the routine they have during school hours.

Teachers should be trained on properly working with students who need extra help. Schools need to do three things in order to reduce reading failure in kindergarten and first grade: (1) purchase an appropriate set of beginning reading materials, (2) adopt a sound developmental phonics approach that supplements large amounts of meaningful contextual reading, and (3) develop a training capability that increases the skill and confidence of teachers (experienced and novice) who work with struggling beginning readers (Morris, 2015). Experienced teachers can excel if they are given the resources to help students do their best.

The Relationship between Low-Socioeconomic Status and Academic Student Achievement

Students in Title I Schools who come from poor families often lack the tools needed to be successful in the classroom. Socioeconomic status is positively related to literacy achievement in all English-speaking countries (Buckingham, Wheldall, & Beaman-Wheldall, 2013).
Achievement disparities between poor and non-poor children are evident even at the start of school. For example, poor children score significantly lower than middle and upper class children on math and reading tests at the beginning of kindergarten (Cooper, Crosnoe, Suizzo, & Keenan, 2009).

Typically, children who live in poverty, including many from minority backgrounds, have impoverished language skills and fewer home literacy experiences than students from middle and higher socioeconomic backgrounds (Al Otaiba et al., 2010). Research also shows that a school environment can be indicative of many families’ socioeconomic status. Buckingham et al. (2013) suggest that evidence is accumulating that a student’s achievement is predicted not just by their own socioeconomic status (SES) but additionally, and more powerfully, by the average SES of their school.

Parenting practices at home can directly impact a student’s ability to progress in school. Family involvement in the educational process will enable children to create positive products (Kocyigit, 2015). Studies have shown that a home-school gap can develop when school learning is not reinforced at home (Panferov, 2010).

In addition, it is necessary to gain some understanding of the advantages and disadvantages of academic student achievement when comparing Title I and non-Title I schools. The greatest resource inequities, not surprisingly, occur between non-Title I suburban schools and Title I urban schools (Jimenez-Castellanos, 2010). Many Title I schools receive funding from the state or government to bring the school level to proficient standards. However, non-Title I schools have the benefit of receiving both government funding, though not as much, and outside funding which help to enrich student learning. “The most needy schools and students
have the least experienced and accomplished teachers and this helps reinforce and perpetuate the social reproduction which often characterizes individuals from lower socioeconomic environments, and contributes to recurring cycles of poverty and underemployment” (Morales, 2016, p. 102).

What can Be Done to Help Students Progress?

Various programs such as smaller classrooms, coteaching, or partner teaching have been implemented in elementary schools to reduce the number of children assigned to one teacher and foster more teacher-student involvement and teacher support for learning (Bronson & Dentith, 2014). One way to assess understanding in phonemic awareness is through examining student writing. A child's writing is a powerful source of information; if a child can write with invented spellings that represent all or most phonemes, then that child is phonemically aware and need not be tested for phonemic awareness (Chapman, 2003). Students can draw a picture and then write a sentence describing their picture. This will help to give teachers a better understanding of where students are individually.

Lastly, setting goals and incentives can instill interest in students to succeed. When students know that they are working for something special, it helps to motivate them to do the best that they can. Giving students a pizza party, a certificate of completion, or a small toy for learning their letter sounds and sight words is a great way to keep them motivated.

Summary

Understanding phonemic awareness is an important learning tool in kindergarten. It is the basis for reading, and, without it, students cannot progress in literacy. Early years are the most important to concentrate on with respect to benchmark testing, as progress and success at this stage of a child’s education is a critical predictor of future academic success (Lee, Sullivan, &
Gupta, 2015). The research supports the need for phonemic awareness and shows that this component is crucial to the development of kindergarten phonics and how the socioeconomic background of the student can affect progress. It is imperative that phonemic awareness is taught every day. With daily intervention, students can succeed in the classroom no matter the socioeconomic barriers.
CHAPTER III

METHODS

The purpose of this study was to determine which techniques impact kindergarten students’ ability to retain phonics in a Title I school.

Design

The design of this study was a modified case study. The study used a pretest-posttest format. The independent variable was the teaching techniques, and the dependent variable was the student achievement. The treatment group received technology-based instruction via a website called abcya.com, daily morning intervention using a D.C. Public Schools Program called FUNdations, and flashcards.

Participants

The participants used were three, five-year-old kindergarten students from the same class. One student is male and African-American. The second and third students are Hispanic, one male and one female, and are considered English Language Learner (ELL) students. The students met daily from 8:15 a.m. to 8:45 a.m. and again from 11:15 a.m. to 11:45 a.m. The school is located in a lower class area of Washington, D.C. and is a Title I school.

Instrument

The instrument used was the DIBELS (Dynamic Indicators of Basic Early Literacy Skills) performance assessment. The assessment included a rubric with four specific areas of measurement. These areas were divided into fluent sound fluency (FSF), letter name fluency (LSF), phoneme segmentation fluency (PSF), and nonsense word fluency (NWF). The students were assessed on their correct pronunciation of beginning sounds, knowledge of letter names, accuracy of word segmenting, and accuracy of sounds within a nonsense word.
Procedure

The purpose of this study was to determine which techniques impact struggling kindergarten students’ ability to retain phonics in a Title I school. The students were assessed at the beginning of the school year using DIBELS. This measured knowledge learned at the beginning of the school year. The students were first called as a group to the carpet to review their FUNdations lesson. The students read the letter sounds of the alphabet as a group. Next, the students were instructed to read the letters of the alphabet individually. This helped to determine which level of help each student needed. Immediately after, each student met with the teacher one-on-one to read flashcards with varying letters of the alphabet to help strengthen their skills. The students spent 10 to 15 minutes each with the teacher.

During the second morning session, the students used smart board technology and practiced letter names and sounds as a group. The teacher used a website called abcya.com for 30 minutes. This routine was incorporated for eight weeks. At the end of the eight weeks, the students were assessed for a second time using DIBELS.

The first part of the DIBELS assessment measured beginning sounds. The teacher read a script to the student, and the student had to identify the beginning sound of the word that he or she was given. The student had to name as many beginning sounds that he or she could within one minute. The second part of the assessment focused on letter names. The student was given a letter, and he or she had to identify the name. The student had to name as many letter names as possible within one minute. The third section of the assessment focused on phonemic segmentation fluency (PSF). The teacher gave a word to the student. For example, the first word would be “cat.” The student had to break the word up into the parts that he or she heard. Next,
the student had to segment as many words as possible within one minute. Lastly, the final section’s focus was nonsense word fluency (NWF). The test was similar to PSF in that the student was also given a word by the teacher. Next, the student had to identify the word. For example, the nonsense word would be “lof.” If the student only sounded out the letters in the word, he or she earned minimal points. The student was given extra points if he or she sounded out the complete word without segmenting. The student had to name as many nonsense words as possible within one minute. All three students were given the same assessment at the end of the eight-week period.
CHAPTER IV

RESULTS

This study examined which techniques impact struggling kindergarten students’ ability to retain phonics in a Title I school. The study was a modified case study which utilized three five-year-old students who were struggling with certain phonemic skills. The students remained in a group setting during the majority of the learning period, yet met individually for one-on-one tutoring as well. Measurements were taken on several variables relative to First Sound Fluency (FSF); Letter Name Fluency (LNF); Phoneme Segmentation Fluency (PSF); and Nonsense Word Fluency (NWF). Data relative to these are displayed in the following Figures. The data represents the students level at the beginning of the year, and at the end of the year.

Figure 1

*Performance on First Sound Fluency*

This graph indicates each student’s performance on first sound fluency through two individual assessments. During the assessment, the student is given a word and he or she is to
identify the sound that he or she hears. The blue graph indicates that Student A knew seven first sounds at the beginning of the year; however, the goal was 10. Student A was below level at the beginning of the school year. By the end of the year, the graph shows that Student A had an increase of 31 first sounds learned and had surpassed the end of the year goal. The orange graph indicates that Student B could identify nine first sounds at the beginning of the year; however, this student fell one point shy of the beginning of the year goal. By the second assessment, Student B had an increase of 16 first sounds but ultimately fell short of the end of the year goal. Lastly, the gray graph indicates that Student C had no prior knowledge of first sound fluency. By the second assessment, Student C had a major increase of 30 first sounds and ultimately met the end of the year goal. Evidence of the data indicates the possibility of an increase in performance between daily intervention and student achievement through increased first sound fluency knowledge for each student.

Figure 2

Letter Name Fluency

This graph indicates each student’s performance on letter name fluency through two individual assessments. This assessment differs from the others in that the assessment does not
ask for a beginning or end of the year goal. However, the data shows each student’s progress. During the assessment, each student is given an upper or lower case letter and they must identify its name. Student A knew two letter names at the beginning of the year. At the end of the year Student A learned 48 letter names. Student B knew three letter names at the beginning of the year. At the end of the year Student B knew 40 letter names. Lastly, Student C had a prior knowledge of five letter names at the beginning of the year. At the end of the year Student C knew 40 letter names. The data shows the possibility that each student made a substantial increase in letter knowledge over the course of the school year.

Figure 3

*Phoneme Segmentation Fluency*

This graph indicates each student’s performance on phoneme segmentation fluency through two individual assessments. During the assessment, the student is given a word and asked to break the word up into the parts that they hear. The data shows that Student A had no prior knowledge of phoneme segmentation fluency at the beginning of the year. By the end of the year, student A could segment 30 words yet fell short of the 40 word goal. Student B could
segment two words at the beginning of the year. At the end of the year, Student B could segment 32 words yet fell short of the 40 word goal. Finally, Student C had was able to segment 21 words at the beginning of the year. The data shows that Student C was above the beginning of the year goal. However, similar to Student A and B, Student C fell short of the end of the year goal.

Figure 4

Nonsense Word Fluency

This graph indicates student performance on nonsense word fluency through two individual assessments. During the assessment, the student is given a nonsense word and asked to sound out the complete word without segmenting. At the beginning of the year, Student A could not identify any nonsense words and did not meet the beginning of the year goal of 17. During the second assessment, Student A’s nonsense word fluency knowledge increased, but fell short of the end of the year goal by eight words. Student B knew a total of 12 words at the beginning of the year but did not meet the goal of 17 words. At the end of the year, Student B increased his nonsense word fluency by 15 words but did not make the end of the year goal.
Student C had knowledge of nine words at the beginning of the year but was below the goal. At the end of the year, Student C increased his nonsense word fluency knowledge by 11 words but fell short of the 28 word goal.

The assessments showed the possibility of increase within each student’s performance. Based on the data given by the assessments, the exercise methods used in this study could be considered an instrumental tool in kindergarten phonics achievement.
CHAPTER V
DISCUSSION

The results of this study indicated that the use of small group learning, one-on-one intervention, and smart board technology impacts students’ ability to retain phonics retention of phonics. The results did not support a hypothesis because there was none. All three students’ posttest results indicated a significant increase in phonics retention over the course of the school year.

Implications of the Results

When students were put in small groups to recite letters and letter sounds through FUNdations, the students showed an increase in letter name fluency. The posttest scores provided information on how many words the students were able to retain by the end of the school year. The consistency of having the students work in small groups daily helped to give each student direct attention opposed to being in a large group setting. Thus, this helped each student to be able to learn many letters and letter sounds.

Secondly, the students’ participation with smart board activities supported the learning of phoneme segmentation and nonsense words. Students had the benefit of repetitively practicing how to segment sounds in words. The data shows that students showed progress and were motivated through participating in individual reading and group reading when engaging in activities. The students were also able to physically touch each word individually to demonstrate comprehension. All three of the students showed increased excitement when engaging in each smart board activity, which significantly helped in their progress.

Lastly, students spent time with the teacher for one-on-one instruction. The consistency of daily one-on-one instruction using flashcards helped each student with first sound fluency. The data shows that by the end of the study, each student showed substantial progress in this
area. The students progressed from very little knowledge in the area of first sound fluency to quickly identifying the first sounds with each flash card displayed. One-on-one intervention greatly contributed to student progress since each student could be worked with without interruption.

**Threats to Validity**

Although the data proved an increase in phonics retention, there were threats to validity within the results of this study. The threats to validity include student attendance, English language learner (ELL) students, and parental involvement.

The first threat to validity is the attendance of the students. Each student was not in attendance for every session. On occasion, students were pulled to work with ELL teachers during the week. Therefore, it is possible that each student’s progress may have been limited. It is unknown how much more progress each student could have achieved if he or she had received the total amount of instruction that was offered on a daily basis.

The second threat to validity is that two out of the three students were ELL students. One of the students was placed in a school setting for the first time with no prior knowledge of a school environment. Each ELL student faced many struggles with pronunciation of letters and letter sounds due to the English language being a second language for them.

Parental support was the final threat to validity. The students were each given phonics website links to use at home. It is unknown how often the parents worked with the students or if the students had any support at from the parents. Some of the parents only spoke Spanish, which could have possibly hindered student progress.

**Connections to Prior Research**
The results of this study show similarity with another study based on small group phonics instruction within the kindergarten classroom. The study examined the effects of a phonics supplemental small group instructional approach for improving kindergartener’s word reading skills. The area of difficulty was in word recognition for students. The participants of this study were six kindergarten students who were divided into two groups. The results of this study indicated that this study suggests that small group phonics instruction resulted in better gains than no instruction on immediate word acquisition (Noltemeyer, Joseph, & Kunesh, 2013). These results support the “daily small group instruction” data that was collected during this study. In the similar study, the students who were struggling in a large group setting responded positively from small group instruction and were shown to have developed basic literacy needs that were not being met during the regular classroom setting. The results indicated that there were gains in the number of words recalled compared to the number of words known during the pretest.

In addition, another study focused on letter sound correspondence through the use of flashcard drill methods (Griffin & Joseph, 2015). The study was similar in that it was a small group study that focused on struggling kindergarten students. The participants of the study were six kindergarten students who were apart of the flash card drilling session for five weeks. The results indicated that the methods targeting all unknown words were more efficient than methods that mixed unknown with known words. The results also indicated that repeatedly presenting the kindergarteners with the same unknown word opposed to multiple unknown words, one after the other, improved all six of the students’ letter-sound correspondence.

**Implications for Future Research**

Further research on which techniques could be used to help struggling kindergarten students to retain phonics in Title I schools would be beneficial in deciding the best methods for
educators to use when helping students to retain phonics. Further researchers could include a larger more random sample of participants. With the current study, a sample size of three students from the same class provides a limited understanding of kindergarten phonics retention. Also, using multiple schools or multiple classrooms within the same school would provide a wider amount of data. Another suggestion to future researchers would be to use another assessment. DIBELS is used widely amongst educators; however, another assessment may prove different results. Finally, future researchers could use a control group of students over a two-year period of time. This would measure progress and provide much more data and insight, which is limited within this study due to it only covering the course of a single school year.

Summary

The results of this study proved that the use of techniques such as small group learning, smart board technology, and one-on-one intervention positively impacted kindergarten students’ ability to retain phonics. The participants in the study showed a considerable increase in areas of first sound fluency, letter name fluency, phoneme sound fluency, and nonsense word fluency; however, the progress was not enough to be statistically significant. The researcher suggests that additional research should be done to gain more understanding of the best methods to help students struggling to retain phonics. Hence, with consistent intervention and dedication, students and teachers could possibly see major growth in reading within the kindergarten classroom.
References


Jimenez-Castellanos, O. (2010). Relationship between educational resources and school


