

The Impact of Explicit Phonics Instruction  
on the  
Fluency Rate of First Graders

by  
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## **ABSTRACT**

The purpose of this pre-experimental study was to examine the impact of explicit phonics instruction on the fluency rate of first grade students. The participants in this study were enrolled in first grade at a school in the Pikesville area of Baltimore County for the 2015–2016 school year. The students in the study received instruction utilizing the Open Court phonics curriculum in addition to the Wonders phonics curriculum in their classroom. The six participants in the group met before school for six weeks, two days per week, for an hour each session. The six students made significant gains in their scores on the post-test versus their pre-test scores. The null hypothesis that explicit phonics instruction would have no impact on the fluency rate of first graders was not supported. Research in this area should continue to determine whether or not explicit phonics instruction would have an impact on the fluency rate of a larger group of first grade students. Further research should include both control and experimental groups.

# CHAPTER I

## INTRODUCTION

### Overview

For many years, fluent reading has been seen as a central component of skilled reading. It has become the driving force in the literacy curriculum. However, much of this focus has centered on a relatively narrow definition of reading fluency, one that emphasizes automatic word recognition (Kuhn, Schwanenflugel, & Meisinger, 2010).

Reading fluency plays a crucial role in reading in the first grade because it is the critical time when children integrate pre-reading and early reading strategies to become readers (Kuhn et al., 2010). Early screening in first grade is employed in many schools to identify those students at risk for failing to develop skills in accurate and fluent word recognition (Clemens, Shapiro, & Thoemmes, 2011). These skills are crucial for reading success in later grades. Phonics and fluency are the two primary ingredients in the teaching of reading and in children's reading development towards the ultimate goal: reading comprehension (National Institute of Child Health and Human Development [NICHD], 2000). Both phonics and fluency need to be taught, practiced, and nurtured in the earliest stages of reading instruction.

Classroom instruction plays a significant role in a student's reading development. The National Reading Panel (2000b) found it essential to devote a subsection to teacher education and reading instruction. The National Reading Panel (2000b) further suggests that providing students with instruction in phonemic awareness and phonics, vocabulary, fluency, writing, and oral language development is necessary to provide children with the tools that would help them to become fluent readers. As teachers work to develop the various aspects of reading to support and to develop a competent reader, the reader must be adequately guided and allowed the

necessary and appropriate practice and feedback in order to continue to develop. Explicit phonics instruction provides a sequential, systematic approach to instruction, practice, and feedback that guide students in the development of fluency skills. This study will focus on explicit phonics instruction and its impact on fluency.

As a teacher for the past twenty-eight years, this researcher has seen the positive impact that explicit phonics instruction has had on the fluency rate of first graders. Not only did it prove to create more fluent readers, but it also produced readers who were able to comprehend the text that they were reading. This researcher's opinion is that this is a result of the students' ability to automatically decode words. Instead of word calling with no comprehension, fluent reading allows students to focus on the meaning of the text that is the ultimate goal of reading.

### **Statement of the Problem**

The purpose of this study is to determine whether or not explicit phonics instruction has an impact on the reading fluency of first graders.

### **Hypothesis**

The null hypothesis for this study is that explicit phonics instruction will have no impact on the fluency rate of first graders.

### **Operational Definitions**

The dependent variable in this study is the *fluency rate* of first graders. Fluency rates can be operationally defined as the accuracy, prosody, and words read per minute in text. Accuracy relates to the ability to decode words in text (not in isolation) without error. Rate refers to the ability to automatically decode words. Rate can also be characterized by age appropriate chunking strategies and possessing a collection of "sight" words that can be recognized and read automatically. Prosody is the use of appropriate phrasing, expression (to include pitch, loudness,

tempo and rhythm), and is believed to be an important factor in comprehension. A fluent reader moves beyond simple decoding to automatically recognize words, interpret text, and retain details of what has been read. Reading fluency can be measured by a students' performance as the number of correct words read per minute.

The independent variable in this study is *explicit phonics instruction*, which can be operationally defined as a systematic approach to instruction that stresses letter-sound associations in a logical, sequential approach.

## **CHAPTER II**

### **REVIEW OF THE LITERATURE**

#### **Introduction**

This literature review explores topics related to reading fluency. The ability to read fluently and to comprehend what is being read are important factors for a student's academic success. Without the ability to read, students will struggle throughout their academic years and even later in life. Without this skill, people tend to have limited academic, social, economic and even emotional success. Fluency is a necessary component in the acquisition of reading, forming a critical link between word recognition and comprehension. It is the bridge that takes a student from word calling to making meaning of the text being read.

In each section, fluency will be discussed as it relates to reading. In order to better understand the relationship between reading comprehension and fluency, the importance of fluency will be discussed and fluency will be defined in section one. In section two, a variety of views will be examined to discuss what good fluency looks like when reading. Section three will examine some of the reasons why students struggle with fluency. In section four, three interventions for improving reading fluency will be discussed.

#### **The Importance of Fluency**

According to Rasinski (2003), fluency has run an unstable and tumultuous course. Early American reading instruction did not consider reading fluency as a primary reading goal. After years of fluency being treated as a "second class citizen" in terms of reading instruction, literary scholars (Samuels & Farstrup, 2011; LaBerge & Samuels, 1974) began to write theoretically and practically about the importance of reading fluency. According to Allington (1983) fluency was considered the reading goal that was neglected.

Since that time, reading fluency has taken a more predominant role as it relates to reading and comprehension. The National Reading Panel (2000b) identified reading fluency as one of the five critical components of effective reading programs. Reading fluency has been described as an essential skill in a reader's transition from learning to read to reading to learn. LaBerge and Samuels (1974) contend that reading fluency is an important indicator of reading acquisition and can be considered the key cause of poor reading comprehension. As a result, more emphasis is being placed on reading fluency as a component of reading instruction.

Students who fail to acquire rapid and accurate decoding skills by third or fourth grade often fall behind their average reading peers in academic performance and achievement (Dudley & Mather, 2005). These students rarely, if ever, catch up, and they have difficulty performing and comprehending grade level work, spending a considerable amount of time decoding words that they should be able to read automatically. The difficulty they have in decoding impedes their comprehension of the text and puts them at a disadvantage when trying to complete a reading task. When a child can read fluently, that child is better able to focus on understanding the text being read. These children benefit from an increased vocabulary, background knowledge and the acquisition of academic skills that set them apart from their peers who are less fluent readers.

### **Fluency Defined**

Considerable debate continues to surround the definition of reading fluency (Dudley & Mather, 2005). Most definitions of reading fluency are based on some aspect of LaBerge and Samuels' (1974) information processing model or Perfetti's (1985) Verbal Efficiency Theory. Both of these theories purport that word decoding and reading comprehension are separate and sequential processes, that word decoding skills correlate strongly with reading comprehension

and that difficulties in automatic word recognition significantly affect a reader's ability to comprehend what they are reading (Jenkins, Fuchs, van de Broek, Espin, & Deno, 2003).

Many researchers and educators prefer to define reading fluency as rate plus accuracy expressed by words per minute (Hasbrouck & Tindal, 1992). Meyers and Felton (1999) contend that reading fluency is represented by one's ability to read connected text with little conscious effort to the mechanics of decoding. In addition, Meyers and Felton state that fluency requires the reader to automatically recognize words at a rate that unburdens a reader's cognitive resources in order that the reader can focus on the meaning of the text. When readers decode automatically, they are able to shift their cognitive energies away from decoding and direct their attention instead to deriving meaning from the text (Dudley & Mather, 2005). Further, these authors state that although these definitions allow us to describe what reading fluency is, to make instructional decisions, educators must also know how to measure fluency, how fast is fluent, how much growth can be expected from reading fluency interventions, and the types of interventions that are effective.

In the *Handbook of Research on Teaching the English Language Arts*, Flood, Squire, Jensen, and Lapp (2003) state that fluency involves the accurate and automatic recognition of words in written text, the expressive (oral) production of the text that reflects syntactic and semantic nature of the text (prosody), that it is an interactive process that involves the making of meaning (comprehension), that it is itself influenced by the reader's comprehension, and that its properties are cooperative in authentic uses of silent as well as oral reading. Although this definition includes oral and silent reading, comprehension and prosody, it does not include the part that rate plays in reading fluency.

Grabe (2010) believes that many skills are involved in fluency. These skills, according to

Grabe, such as automatic recognition of words, a vast recognition vocabulary, the ability to process grammatically and basic meaning proposition units for reading comprehension, are a result of implicit, rather than explicit learning of features of language knowledge. Grabe believes that many skills are involved in fluency, namely automatic word recognition, a large recognition vocabulary, skilled grammatical processing, and the formation of basic meaning proposition units, for reading comprehension only emerges as an outcome of implicit learning rather than explicit learning of aspects of language knowledge. Grabe also believes that implicit learning is gradual, initially very fragile and strongly based in repetition of form and process over a long period of time. This means that extensive reading, reading rate practice, and rereading of text all play a role in the process of becoming a fluent reader.

To formulate a definition of fluency, a synthesis of the previous definitions is attempted here in its simplest form. Fluency is composed of three main components: rate, accuracy and prosody. Rate refers to reading at the appropriate speed for their grade level. This rate can be calculated by the teacher or another measure can be used. Accuracy refers to the ability of the reader to have high automatic word recognition and the skills to sound out unfamiliar words without losing the meaning of the text. Prosody is the pitch, stress and timing used when reading.

### **What Does Good Fluency Look Like?**

There are many views of what good fluency looks like. In this section, a variety of views will be explored. This section will attempt to discuss information about prosody, automaticity, rate and other factors related to what good fluency looks like. Elementary, middle and high school teachers are encountering greater numbers of students who read fast, but who do not comprehend what they are reading. The question then becomes: are accuracy, prosody and reading comprehension being sacrificed at the expense of improving reading rate? (Hicks, 2010).

A student's reading rate is determined when a child reads a passage from grade level or independent reading level text and the number of words read correctly in one minute is calculated. The message given to the reader is that fast reading equals good reading (Baker, Smolkowski, Ratz, Fien, Seeley, Kame'enui, & Thomas-Beck, 2008). In contrast, Baker et al. (2008) states that in reality different texts are read for different purposes; therefore, reading rate is to be adjusted depending on the text being read and the purpose for which the text is read. Taking this into consideration, a text containing technical (e.g. scientific information or data) would not be read at the same rate that one would read a novel or magazine article. The speed at which one reads a text depends a great deal on the complexity of the text. In a text that is technical, one might reread a section several times for clarification. One might skim a magazine or newspaper article for certain information, and one might slow down their reading rate to savor the enjoyment of the story developing in a novel. This means that fluent reading can look different depending on what is being read.

When considering what fluency looks like, LaBerge and Samuels (1974) state that fluency can only be successfully accomplished when a person can alternate their attention between tasks or when one or more of the tasks have been learned so well that it can be performed automatically, effortlessly, or with minimal employment of attention. Reading, they argue, employs multi-tasking. LaBerge and Samuels contend that successful readers are able to identify and understand words accurately and at the same time construct or comprehend the meaning intended by the author of the text. If this is the case, then it would stand to reason that readers who cannot multi-task in their interaction with text are less proficient in their ability to decode words, which makes it difficult for them to sufficiently read automatically, resulting in poor comprehension.

In reading, prosody refers to the ability to make oral reading sound like authentic oral speech. In other words, reading should sound the way we speak. The National Reading Panel (2000a) states that prosodic reading is an essential component of reading fluency. The ability to chunk or phrase text into syntactically appropriate and meaningful multi-words units is a critical aspect of learning to read (Schreiber, 1991). Thus when considering what good fluency looks like, one must be able to read words in such a way that it mimics natural speech patterns.

According to Rasinski, Rikli, and Johnston (2009), although prosody is usually mentioned in the scholarship on fluency, it is rarely assessed in classrooms or in research. They conducted a research study to explore the relationship between reading comprehension and reading fluency, as measured by prosody. As a result of the study, Rasinski et al. (2009) concluded that “the magnitude of the correlations between prosodic fluency and silent reading comprehension were substantial to operationalize reading fluency” (p. 359). While rate may be a measure of word recognition automaticity, it does not fully show the prosodic component of reading, that component that connects comprehension to fluency. Instruction focusing on prosody in oral reading may impact comprehension to a greater degree than instruction that is aimed at improving reading rate and automatic word decoding. As a result of reading this study, one could come to the conclusion that good fluency employs the skill of prosodic reading, not just in the primary grades, but in the intermediate grades as well.

According to Kuhn et al. (2010) automatic word recognition is essential to the construct of fluency and the role it plays in comprehending text. These processes are considered to be automatic when speed, effortlessness, autonomy and lack of conscious awareness are involved (Logan, 1997). Logan further states that with the development of automaticity (speed or rate), in terms of reading, perceptual-motor activities, or other skilled tasks, the learner’s performance not

only becomes more accurate, but it also gets faster. The learning curve for these tasks follows what is known as the *power law*, which states “that the reaction time decreases as a function of practice until some irreducible limit is reached. Speed increases throughout practice, but the gains are largest early on and diminish with further practice” (Logan, 1997, p. 123).

Effortlessness refers to the sense of ease with which a task is performed and to the ability to carry out a second task while carrying out the first, automatic one (Kuhn et al., 2010). In addition, Kuhn et al. (2010) state that one task needs to be automatic if a person seeks to perform two tasks at the same time. Effortlessness can be seen as 1) fluent readers’ lack of struggle in recognizing most of the words they encounter in a text; and, 2) fluent readers not only decoding text, but simultaneously comprehending what they are reading. In addition to rate and effortlessness, the automatic processes in good reading fluency are autonomous. These processes occur without intention, starting and ending independent of the direction or intent of the person performing the act. According to Logan (1997), once lower level word recognition skills become automatic, the conscious awareness of the sub-skills that comprise them disappears. This lack of conscious awareness in word recognition sets a fluent reader apart from their disfluent peers. Good fluency encompasses all of these skills (rate, effortlessness, autonomy) and allows the reader to “free up” time and effort in order to comprehend what is being read.

If the ultimate goal of reading instruction is reading comprehension, then reading fluency, both automatic word decoding and prosodic reading, are needed as a part of the instructional materials offered to teachers and students, especially for those students who struggle with reading.

## **Why Do Students Struggle With Fluency?**

Fluency is a key component in reading to learn; however, some students continue to struggle with fluency. Most beginning readers develop into fluent readers even when a lack of intentional focus on fluency exists, but some beginning readers fail to move beyond word-by-word reading. They may continue to struggle even after they have been instructed in effective decoding strategies, and they are able to read reasonably accurately (Samuels & Farstrup, 2006). This section will explore some of the reasons that children struggle with fluency.

In the majority of schools, struggling readers are lucky if they spend 10 to 20 percent of their school day in lessons designed to meet their needs (Allington, 2006). The lessons that do exist are created by the school to provide interventions that will help the struggling reader to become a better reader. Allington (2006) argues that struggling readers need a full day, at least, of high-quality lessons if they are to match or even exceed the reading growth patterns observed in their higher-achieving peers. Unfortunately, most of their day is spent in classrooms where the instruction is targeted to the average achieving student. This means that the struggling reader will continue to struggle because they do not receive the appropriate level of instruction at their level, but at the level of their average achieving peers. Allington (2006) believes that there is a greater possibility that students would be more successful in reading and would not continue to struggle if they were taught at their level for the majority of the time. This may not necessarily be the case for all struggling readers; however, teaching them at their independent level can foster growth in reading fluency and comprehension, giving them a better chance at acquiring the necessary skills to become fluent readers. According to Allington (2012), struggling readers participate in too little high-success reading activity every day. This is one reason so few struggling readers ever become achieving readers. Consider this:

That second-grade student still reading at the first grade reading level often spends his day in a second-grade classroom where almost every lesson is focused on second-grade-level students. Too often, even the reading lesson is drawn from a second-grade core reading program, a text too hard for that struggling reader. Rarely, if ever, will second-grade students who are struggling readers benefit much from second-grade reading lessons. The lessons are simply over the children's heads, and rarely do the instructional guides provided by the publishers of second-grade reading programs contain useful advice on how to modify, adapt, or replace reading lesson materials so that struggling readers will benefit (McGill-Franzen, Zmach, Solic, & Zeig, 2006).

Allington (2013) states that the amount of time students spend reading can also be factor in why students struggle to read. For any number of reasons, struggling readers in U.S. schools do far less reading than good readers. Some of this, undoubtedly, has to do with reading motivation. That is, children who struggle with reading engage in less voluntary reading than do good readers. In addition to limiting the volume of independent reading that children do during the school day is the evidence that we do not design lessons so that those who are struggling will read more every day than their peers who have successfully developed reading proficiency. That is, we fill struggling readers' days with tasks that require little reading. Allington (2013) believes that if we want to foster reading development, then we must design lessons that provide the opportunities for struggling readers to actually read and that the more opportunities struggling readers have to read text at their level, the more likely it will be that they will become more fluent readers. Providing them with books at their level, that they find interesting and that they are better able to relate to their lives may also give them incentive to want to read more frequently.

According to Duke and Block (2012), research has continued to acknowledge the importance of reading outside of school. Students reading on grade level read twice as much outside of school in comparison to those who struggle with reading. For example, Guthrie, Wigfield, Barbosa, Perencevich, Toboada, David, Scafiddi, and Tonks (2004) found that fourth-grade students who read only at second-grade level engaged in no outside reading. Fourth-graders reading at third-grade level read for only fifteen minutes a day outside the classroom (including homework). Students will continue to struggle with reading as long as this trend continues.

Underdeveloped fluency is another reason that students struggle with reading. Students who read fluently are able to orally decode a text accurately, quickly and with appropriate prosody and expression. Struggling readers commonly have difficulty with fluency because they have underdeveloped word reading and vocabulary. This underdeveloped word reading decreases automaticity and reduces speed. The overall outcome is one in which students spend excessive time thinking about words rather than understanding text (LaBerge & Samuels, 1974). For these students,

the reading process is often laborious, choppy and disjointed as they commonly demonstrate one, or a combination of the following: deficits in word reading abilities, weaknesses in applying letter-sound correspondence to the word they are reading, lack of understanding of word meaning, slow word retrieval skills or limited practice resulting in a delayed approach to reading. (LaBerge & Samuels, 1974, p. 294)

### **Interventions for Fluency**

Many discussions are taking place regarding interventions that can be implemented to develop fluent readers. While fluency is a critical but often neglected element of reading

programs (Allington, 2013), there are many reasons that students with learning disabilities or with reading difficulties struggle with fluency. One such problem is the inability to read sight words, decode words, and read phrases and sentences automatically and rapidly (Chard, Vaughn & Tyler, 2002). Snow, Burns, and Griffin (1998) stated that since the ability to obtain meaning from print relies strongly on the development of accuracy with word recognition and reading fluency, these skills should be assessed regularly in the classroom, allowing for a timely and effective response when difficulty or delay is recognized.

Part of the issue according to Chard et al. (2002) is that effective interventions for improving fluency are not widely known. Chard et al. state that a synthesis of research has highlighted the importance of the development of reading fluency and the need for it to be a part of daily instruction. When fluency development becomes a part of daily instruction, students have the potential to become more fluent readers and ultimately better equipped to comprehend what they are reading.

### **Explicit Phonics Instruction**

Phonics is a very important component of literacy instruction because English is fundamentally an alphabetic code (Moats, 2000; Venezky, 1999). Phonics describes the letter or symbols used to encode the spoken components of language and is a system for encoding speech sounds into written symbols (Mesmer & Griffith, 2005). It also refers to teaching learners the relationship between letters and sounds and how to use this system to recognize words.

Reading involves recognizing words and then understanding the individual and collective meanings of those words, with the ultimate goal being to get to the meaning of the text (Mesmer & Griffith, 2005). In order to gain an understanding of the text, a student must be able to master the knowledge of letter-sound relationships, recognize that these sounds combined make words,

read the words automatically, and then make meaning from the combination of words put together in the text (Mesmer & Griffith, 2005). This is why phonics instruction plays an important role in fluency.

Explicit phonics instruction is necessary in the acquisition of reading fluency and ultimately, reading comprehension. Explicit phonics instruction is a process by which students are taught to develop phonemic awareness, identifying that words are composed of syllables and sounds that can be separated and manipulated and used in other words (Chard et al., 2002). In explicit phonics instruction, the sounds associated with the letters are identified in isolation and then blended together to form words. The teacher directly tells students the sound represented by an individual letter (Chard et al., 2002). It is a systematic, sequential process.

According to the National Institute of Child Health and Human Development (2000), phonics and fluency are the two main ingredients in the teaching of reading and in children's reading development. Alone, neither adds much to the process of reading, but together they blend into a fine and enjoyable outcome: reading for pleasure and learning at a level corresponding to a reader's background knowledge (Rasinski, Rupley, & Nichols, 2008a). With that being said, one can conclude that fluency instruction is as much dependent on phonics instruction as phonics instruction is on fluency instruction.

### **Repeated Reading**

Although phonics and fluency work together to increase a student's reading rate and to improve comprehension, fluency instruction is not limited to the process of explicitly learning the letter-sound relationships involved in explicit phonics instruction. Repeated reading can be thought of as continued practice in the instructional process of teaching a child to read fluently. After a review of reading research, the National Reading Panel (2000b) found that through

systematic, guided practice, students' oral reading fluency improves. Additionally, students across grade levels participating in guided fluency practice improved both word recognition and comprehension.

According to Kostewicz (2012), the general format for repeated reading has a student read grade-level text multiple times until a goal is reached. Once the goal is reached, the student would read a different grade-level text that is equivalent—having the same lexile level—to the first. The process would stop once the student reads the new passage fluently or continues with text that is more difficult. The concern with this process, according to Rasinski (2006), is that when a teacher's goal is to improve reading rate through repeated reading, he or she may have a habit of focusing only on reading rate. Students may become faster readers but still lack the ability to comprehend what they are reading.

A single-minded focus on using repeated reading to improve reading rate, without emphasis on reading for meaning, will not have the desired result of improving comprehension and will eventually return reading fluency to a secondary role in the curriculum (Rasinski, 2006). Consequently, when repeated reading is implemented in instruction, teachers must be mindful not to focus on rate alone, but must incorporate accuracy and prosody so that comprehension of the text is the ultimate goal. If teachers keep this ultimate goal in mind, repeated reading can help both the normal and the below-average reader to improve over time (Faver, 2009).

### **Performance Genres to Improve Fluency**

While repeated reading can be both beneficial and effective in increasing reading rate, the text chosen for repeated reading must be carefully selected. The text should lend itself to expressive oral performance. According to Rasinski, Rupley, & Nichols (2008b), there are several text genres that are specifically meant to be performed or that are easy to perform;

rhythmical, rhetorical, or interactive texts such as poetry, song lyrics, chants, rhymes, plays, monologues, dialogues and letters are especially effective. These specific kinds of texts work well for oral reading expression and meaning and not just speed. Further, Rasinski, et al. (2008b) states that by using these genres, teachers expose students to a wide variety of reading genres, and by practicing and performing them, students gain accuracy, automaticity, prosody and comprehension.

According to Rasinski et al. (2008b), classroom research has also shown that this approach to repeated readings has helped students make remarkable progress in reading rate, even though improving reading rate was not emphasized. General growth in reading and, perhaps most significant, enjoyment of reading have also increased.

### **Conclusion**

Fluency instruction is an essential component of reading instruction. It provides students with the ability to place less focus on decoding and word reading and more emphasis on comprehending the text being read. While there are students who struggle with fluency, there are also interventions that can be employed to help to increase a students' fluency rate, to enhance comprehension, and to foster a love of reading. It is imperative that teachers of reading employ these interventions that encompass all aspects of fluency (rate, accuracy and prosody), including, but not limited to, explicit phonics instruction, repeated reading, and poetry in order to give students balanced and systematic instruction in reading fluency. With all of the necessary components in place, students can achieve the goal of reading fluency, and ultimately, reading comprehension.

## **CHAPTER III**

### **METHODS**

The purpose of this study was to examine the effects that explicit phonics instruction has on the fluency rate of first graders.

#### **Design**

The design that was used for the study was a pre-experimental design with a pre-test, treatment, and post-test format. A single group is studied at a point in time after the treatment to determine whether or not the treatment had an effect on the reading fluency of the group. No control or comparison group is employed. Scores were examined from the DIBELS (Dynamic Indicators of Basic Early Literacy Skills) benchmark assessment administered in the fall of the 2015-2016 school year to determine the group of students that would receive intervention. The following design was used: OXO.

Pre-test (DIBELS Spring benchmark)-O

Six weeks of treatment (before school intervention)-X

Post-test (DIBELS Spring benchmark)-O

The pre-test (DIBELS Spring benchmark) included assessments in letter naming fluency, nonsense word fluency, and phoneme segmentation fluency. Based on these scores, students were placed in an intervention group that would meet twice a week. Each session lasted one hour before the school day began. After the treatment period, the DIBELS Spring benchmark (considered the posttest for this study) was administered, testing the same areas.

The independent variable is explicit phonics instruction, while the dependent variable is the fluency rate. The null hypothesis proposes that explicit phonics instruction has no impact on the fluency rate of first grade students.

## **Participants**

The participants were first grade students who were assessed using the DIBELS (Dynamic Indicators of Basic Early Literacy Skills). The students selected for the intervention scored in the “Intensive Strategic Core” category on more than one of the subcategories. This is an indication that the student is at risk for reading difficulty. Students participated in a six-week, before school intervention group, utilizing the Open Court Phonemic Awareness and Phonics, Grade 1 Kit (McGraw-Hill) in addition to the regular Wonders (McGraw-Hill) phonics instruction they received in their classroom daily. Of the 25 students in the class, six students were chosen to participate in the study. At the time of the study, five of the students were 6 years old, and one student was 7 years old. There were 2 female students and 4 male students. Each of the six students qualified under the FARMS (free and reduced meals) and resided in low to middle class socioeconomic households. All of the students were African American. Parent consent and commitment to bring students to school early on the intervention days was also considered in the selection of the participants. The school is located in Baltimore County, Maryland.

## **Instrument**

The instrument used to assess students was the DIBELS (Dynamic Indicator of Basic Early Literacy Skills). DIBELS is a set of measures used to assess early literacy and reading skills for students from kindergarten through sixth grade. It was designed to be a cost effective and efficient way to help teachers to make informed decisions about reading instruction, to help the teacher provide support early and to prevent the occurrence of later reading difficulties (Good, Kaminski, Moats, Laimon, Smith, & Dill, 2002). In addition, the information obtained from the assessment is used by teachers to group students for small group instruction in the classroom. DIBELS consists of

seven different subcategories: Letter Naming Fluency (LNF), Initial Sound Fluency (ISF), Phoneme Segmentation Fluency (PSF), Nonsense Word Fluency (NWF), Word Use Fluency (WUF), Oral Reading Fluency (ORF), and Retell Fluency (RF). The National Research Council (1998) and the National Reading Panel (2000b), respectively, concur that DIBELS assesses the essential skills, or the basic early literacy skills that every child must master to become a proficient reader. Based on a review of the DIBELS measure obtained in the *Buros Mental Measure Yearbook*, Brunsman (2002) states that documentation of reliability of scores and evidence of validity for the described purposes of the DIBELS is insufficient. In addition, Brunsman states that the developers did not provide a rational or evidence of validity scores for the purposes they described. There are few indicators related to reliability and validity, but the data provided are totally unusable because the developers do not describe the participants or methodologies used in the study. Shanahan (2003) states that the sufficiency of validity and reliability for a measure depends upon the use of the measure. Given that the purpose of the DIBELS is to help teachers to prescribe individual instructional responses in targeted areas, the reliability and validity standards could be lower than for many educational tests that have higher stakes. Shanahan found there to be some useful information about the reliability and validity of some of the tests. According to Shanahan, DIBELS seemed to have fairly high levels of test-retest (.92-.97) and an alternate form (.92) reliability as well as high predictive and concurrent validity when compared to the Woodcock-Johnson Reading Test and other measures. Based on the information in the review of the DIBELS conducted by Brunsman (2002) and Shanahan (2003), the information that they had at their disposal to fairly review the reliability and validity of the DIBELS was insufficient.

The reviewers do not agree on the usefulness of this measure. Shanahan (2003) stated that he would not hesitate to use most of the subsections for screening and monitoring purposes. He

concluded that despite the low stakes nature of DIBELS, most of the measures have such strong psychometric properties that they are more comparable to higher stakes individual assessments (such as the tests used to determine eligibility for special education). On the other hand, Brunsmann (2002) stated that there is insufficient evidence of the reliability and validity to support the use of the DIBELS for predicting scores on high stakes reading achievement tests or for identifying students in need of instructional interventions. She also discusses the complicated nature of administration and scoring of the DIBELS. Brunsmann further cautions users about using DIBELS for the described purposes unless additional information is made available so that users can evaluate the validity of DIBELS scores for these purposes.

Both reviewers agree that the DIBELS is not a good assessment for reading comprehension. Brunsmann (2002) states that if it is the goal of DIBELS to predict success on high-stakes reading achievement test and to evaluate reading instruction, the appropriate thing to do would be to measure reading comprehension at some point to establish a relationship with the DIBELS measures. Shanahan (2003) agrees that the DIBELS is made for many of the Reading First requirements, but not for comprehension. Both Shanahan (2003) and Brunsmann (2002) agree that the technical information on DIBELS leaves much to be desired. Brunsmann (2002) cites a lack of information as it relates to the predictive relationship of DIBELS to state assessments, the lack of information concerning decisions rules, and the effects of lack of demographic information on scores or predictive relationships. Shanahan (2003) agrees concurs that the availability of technical information on the DIBELS is spotty and that the technical information left important questions.

DIBELS was used in this study for the purpose of determining the fluency rate of first graders. The researcher determined that the information obtained from the DIBELS assessments was adequate for the study being conducted.

## **Procedure**

The study was intended to determine whether explicit phonics instruction would have an effect on the fluency rate of first graders. The students were initially tested in the fall of the 2015-2016 school year, using the DIBELS Benchmark assessment, in order to determine their benchmark score in the areas of LNF, NWF, and PSF.

Prior to the intervention, the researcher obtained the Open Court Phonemic Awareness and Phonics Grade 1 Kit, a McGraw-Hill product. The kit contained explicit phonics lessons for teaching letter sounds, segmenting and blending sounds and vowel sounds. A room was prepared to eliminate distractions for the students. All of the materials were prepared prior to the beginning of the intervention sessions. Packets were created in the form of a “workbook” for each student participant. Letter cards were packaged for each student to use for segmenting, blending, and reading and writing words. Based on the scores on the DIBELS, a focus was placed on segmenting sounds, blending sounds to make words (real words or nonsense words), and vowel sounds. Charts with nonsense words were created for students to read (timed, in order to mimic the DIBELS).

Letters and permission slips were sent home to parents that explained the reason for the intervention and indicated the times, dates and length of the interventions sessions. The times of the sessions were carefully selected to take place prior to the administration of the DIBELS Winter benchmark assessment period.

When the intervention sessions began, students practiced naming the letters and the corresponding (LNF) sounds each day. Students then worked on segmenting words (PSF), blending letters together to make words and writing words (NWF), a timed reading of nonsense words, and reading a decodable text (three times). Students were given copies of the decodable

book to take home for practice. The intervention sessions were designed to give students practice in becoming fluent with reading nonsense words, with segmenting, with blending letters to read words, and with reading decodable text. The overall goal was to give students explicit phonics instruction that would enable them to fluently read the timed subsections of the DIBELS. The ability to read fluently would ultimately help students to read passages fluently and therefore increase their comprehension. Comprehension of the text was not the goal of the study; however, the ability to fluently read text would ultimately affect comprehension. At the end of the six-week period, students were given the winter benchmark of the DIBELS (used as the posttest) to determine whether or not the intervention had an effect on their fluency rate.

## CHAPTER IV

### RESULTS

A group of first graders were chosen for this pre-experimental study to determine whether explicit phonics instruction would have an impact on their fluency rate.

A pre-test was administered to serve as a benchmark prior to the intervention. The students participated in a six-week program that met two days per week. Each session was one hour in duration. The intervention consisted of explicitly taught segmenting, blending, reading and writing words and vowel sounds.

Table 1 shows the means and standard deviations of the reading measures for the intervention group.

**Table 1**

*Means and Standard Deviations of Reading Measures for the Group.*

<b>Measure</b>	<b>Pre-test Mean (Standard Deviation)</b>	<b>Post-test Mean (Standard Deviation)</b>
<b>Letter Naming Fluency</b>	9.17 (3.371)	51.83 (8.976)
<b>Phoneme Segmentation Fluency</b>	7.00 (4.858)	38.17 (6.969)
<b>Nonsense Word Fluency</b>	8.17 (5.776)	16.67 (4.633)

A series of dependent *t*-tests were run to examine if there was a significant difference in reading skills before and after the intervention. Results showed a significant difference in letter naming fluency [  $t(5) = -9.610, p < .001$  ], phoneme segment fluency [  $t(5) = -11.870, p < .001$  ], and nonsense word fluency [  $t(5) = -11.825, p < .001$  ]. These results and their implications are discussed in Chapter 5.

## **CHAPTER V**

### **DISCUSSION**

The purpose of this study was to determine the impact of explicit phonics instruction on the fluency rate of first graders. The null hypothesis, that explicit phonics instruction would have no impact on the fluency rate of first graders, was not supported. Results of the study demonstrated that there was a significant difference at post-test compared to pre-test.

#### **Implications of Results**

After reviewing the results, this study showed that explicit phonics instruction does have an impact on the fluency rate of first graders. The intervention had a positive and significant impact on the DIBELS post-test benchmark scores of the students in the group. The students made significant gains noted by their pre-test versus their post-test scores. Without the intervention, it is possible that this group of students might have made gains. However, the significant gains made indicate that explicit phonics instruction is a powerful tool for increasing the fluency rate of first graders.

#### **Threats to Validity**

The study was conducted with a small group of students. The size of the group that received the intervention poses a threat to the validity of the study, because the group only had six students. As a result of this, a conclusion about the impact on a larger group cannot be made. Additionally, there are other outside threats to the validity of the results of the study. Had the students not attended each of the intervention sessions, the results could have been less significant.

During the intervention, students were given timed fluency exercises; however, it was not a testing situation. The DIBELS is a timed assessment where students have one minute to read

through each of the subcategories (LNF, PSF, and NWF). The timed aspect of the test could have affected the student's ability to perform well on the assessment. Some students do not do well in testing and/or timed situations.

To further eliminate threats to the internal and external validity of the study there are some additional changes that could be implemented. In order to create a comparison, a control and an experimental group should be formed. Other suggestions to solidify the validity of the study would be to conduct the intervention during the school day, to make sure that the intervention program is being implemented with fidelity, to increase the duration of the intervention, to increase the size of the groups in the study and to make sure that the same teacher delivers the instruction to eliminate any differences in teaching style. All of these elements could affect the validity of the study.

### **Connections to Previous Studies**

There is a vast amount of research that addresses the need for phonics instruction in the classroom. According to their research, Duke, Pressley, and Hilden (2004), state that readers who have difficulty with reading comprehension and reading achievement more than likely have difficulty with decoding and fluency. They also contend that both phonics and fluency need to be taught, practiced and nurtured in the early stages of reading instruction. Taught together, these two components can impact a student's reading ability.

The National Reading Panel (2000a) recognized the importance of reading fluency and as a result, conducted a meta-analysis of research on fluency building. Based on the information obtained, the National Reading Panel (2000a) concluded that systematic phonics instruction helped children to learn to read "better than all forms of control group instruction" (p. 393). Further, it is stated that systematic phonics instruction proved to be effective and should be

implemented as a part of literacy programs to teach beginning reading, to prevent and to remediate reading difficulties. This means that systematic phonics instruction is a vital part of any literacy program being implemented.

### **Implications for Future Research**

This study showed positive results in the fluency rate of first graders after only a six-week intervention program was employed. The data showed that implementing explicit phonics instruction produced significant growth in the fluency rate of first graders. Although the study was done using a small group of students, it has some implications for conducting the study with a larger group of students. It can be used as a basis for creating an intervention program designed to be implemented with a variety of populations of learners.

Using the Open Court phonics program along with the phonics program used in classrooms, using the techniques, the reading practice and the timed practice can give students the tools they need to become fluent readers. An additional area for further investigation is whether or not explicit phonics instruction has an impact, not only the fluency rate of first graders, but on how it impacts reading fluency and comprehension of text. Future research should also use a larger number of participants, to see if this impacts the statistical results. In the future, this study can be used to enhance the phonics program in the school setting to help students to make gains in their fluency rate.

### **Conclusion**

In conclusion, this pre-experimental study proved to be successful. The students who participated in the study made significant gains on post-test scores versus pre-test scores after the intervention. It is important to note that the intervention took place over a six-week period between the DIBELS Fall benchmark in the month of October and the DIBELS Winter

benchmark in January. Considering the duration of the intervention, which was nominal, it would stand to reason that an intervention that took place over a longer period of time would yield more significant results. The researcher in this study used materials and created strategies that students were able to grasp, retain and apply in order to make gains on the assessment. The study demonstrates that with explicit phonics instruction, students are able to increase their fluency rates and that explicit phonics instruction is a necessary component of fluency instruction.

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