Teaching Sight Words through Games: Impact on Retention and Fluency Levels

Amanda Susan Tibbatts
The College at Brockport

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Teaching Sight Words through Games:  
Impact on Retention and Fluency Levels

by

Amanda Susan Tibbatts

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Teaching Sight Words through Games: Impact on Retention and Fluency

Levels

by

Amanda Susan Tibbatts

APPROVED BY:

Linda Kramer Schlosser
2nd Reader

Director, Graduate Programs

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Date
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Chapter One

Introduction

Given the importance of reading in society, it is the duty of educators to provide each student with a strong foundation in the basics of reading. Because English is a tricky language, even though students may be adept at using a variety of reading strategies to decode words, some words a student must be able to recognize and read on sight. The historical context of reading education is to merely learn to "sound out" words. This, obviously, is not the only strategy and it does not work for many words in the English language.

Given this observation, the researcher is concerned that the first grade students in her classroom are not retaining the numerous sight words the class has gone over during the year using both flash cards and word walls. Since the students seem to be struggling with the current method of sight word instruction in the classroom, the researcher recognized the need to implement an intervention to teach sight words in a context outside the current method being employed.
Purpose and Rationale

The first grade students in the researcher's classroom have been grappling with sight words since the beginning of the school year. Sight word instruction consists of reading and spelling the words together as a class using flash cards. These words are then added to a word wall in the classroom. Each week, more words are introduced and added to the ones the students are supposed to know. However, as the class reads together, numerous students stumble over words that have been reviewed consistently since week one. While a student is able to recognize the words when they are on the word wall, he does not make the same connection when the word is in a different context, such as in a story he is reading.

The researcher has also observed that while the class reviews the sight words during reading instruction, some of the students display actions indicative of boredom - many students are not focused on the flash cards as the words are displayed, and many are fiddling with pencils or books. Most students mumble the words and spellings of the words back to the teacher, rather than speaking clearly. It is the researcher's belief that if the students are not actively engaged with the material, they will not be able to retain it for any extended length of time.
The goal of the researcher is to find a new way for first grade students to interact with and learn sight words in the classroom, since the current method of teaching and reviewing the words appears ineffective for most students. The researcher possesses three strong beliefs which have shaped her study. The first is the belief that students will not retain information if they are constantly bored. She has postulated that using games in the classroom provides students with the opportunity to work with one another in a non-threatening way that can be both fun and educational. The second belief is that sight words taught out of context are more difficult to learn and retain than ones consistently displayed within the context of some form of text, be it a sentence, a passage, or a complete body of work. Lastly, the researcher believes that the more sight words a student is able to recognize, the higher that student’s reading fluency scores will be; higher fluency scores tend to lead to stronger comprehension for text read. Thus, the purpose of the research is to determine whether teaching first grade sight words to students in a gaming environment will impact memorization and retention levels of sight words, leading to higher fluency levels in the students.

Driven by these beliefs, the researcher has molded the purpose of her study to explore the following question: How does teaching sight words through games impact sight word retention and reading fluency in first grade
students? The study seeks to collect data that will be used to strengthen the researcher's practice and increase her understanding of best practices for teaching sight words in the first grade classroom, in addition to providing data that will equip other teachers in the researcher's school with additional tools for implementing and modifying sight word instruction in the classroom to benefit students.

Definitions

- **Sight words:** words used are taken directly from the *Dolch Sight Word* list for First Grade (Please refer to Appendix A)

- **Reading fluency:** the number of words a student is able to read accurately in one minute

- **Sight word recognition:** the number of sight words a student is able to recognize prior to practicing the words using a sight word game

- **Sight word retention:** the number of sight words a student is able to remember beginning the week after practicing the words using a sight word game
Chapter Two

Literature Review

What are sight words?

Sight words, sometimes referred to as sight vocabulary or high frequency words, is a term heard often in the literacy classroom. However, defining this term becomes complex. One simple definition is that a sight word is merely any word a person is able to recognize and identify out of the context of a block of text (Bear, Invernizzi, Templeton, & Johnston, 2004). This would mean that a literate adult may have thousands of sight words under his belt.

Another definition narrows this broad view and suggests that a sight word is any word that can be “recognized quickly, accurately, and effortlessly by the reader” (Bukowiecki, 2007, p.60). Again, this definition looks broadly at the fact that any word could be, or become, a sight word to an individual.

A still more concise definition asserts that a sight word is a word which is frequently found in text, but holds ambiguous meaning in and of itself (Burleson, 2002). An example would be the word the. Burleson goes on to point out that sight words are the filler in text which bind together definable words to create meaning.
Why are sight words important?

In 1948, Edward William Dolch designed a list of 220 words, which he referred to as “service words” which were frequently found in children’s books. He asserted that these words were necessary for students to learn on sight to become fluent readers (Dolch, 1948). As Burleson points out, when readers are not proficient with these high frequency sight words, “reading is a tedious, meaningless chore” (2002, p.60).

Reading fluency, as defined by Sousa, is the “ability to read text orally with speed, accuracy, and proper expression” (2005, p.82). Rasinski supports and expands on this definition by suggesting that reading fluency is three dimensional. Dimension one refers to accurately decoding words within text. This is where phonics comes into play; a student must be able to sound out words in order to effectively read text. The second dimension looks at processing words automatically. It is at this juncture that sight words are important. As Rasinski explains, “Readers need to expend as little mental effort as possible in the decoding aspect of reading so that they can use their finite cognitive resources for meaning making” (2004, p.46). One goal of learning sight words is to assist a student in bypassing the need to decode each word, so that student is able to devote more thought to comprehending the text rather than sounding out each word. The third dimension is prosodic
reading. Prosody refers to expression in reading, such as proper phrasing, natural verbal inflection and emphasis on key words in text, and attention to punctuation. Rasinski (2004) asserts that if students read merely quickly and accurately, but pay little attention to prosody, they will struggle in garnering meaning from what is read.

Samuels (1997) takes fluency one step further, and says that reading fluency does not simply lead to comprehending text, but is an integral part of fluency itself. As he explains, "As less attention is required for decoding, more attention becomes available for comprehension" (1997, p. 377). If a student can read, but does not comprehend what she has read, then the student was never truly fluent at reading in the first place.

Many educators believe that students who are proficient with sight words possess higher levels of reading fluency (Burleson, 2002; Gipe, 2006; Kourea, Cartledge, & Musti-Rao, 2007). Some research has also found that the students who read fluently are better able to comprehend text (Bukowiecki, 2007; Burleson, 2002; Gipe, 2006; Sousa, 2005; Rasinski, 2005). However, this is a contested notion among researchers of the reading process. While most agree that there is a link between reading fluency and comprehension, some believe there is no causation – fluency cannot lead to better comprehension (Pressley & Wharton-McDonald, 1997; Adlof, Catts, &
All researchers agree, however, that the true goal of reading is comprehension. If one does not find meaning in text, there is not real purpose to reading it. Reading fluency may be a helpful precursor to helping readers make meaning of texts they read. For students to become fluent readers, a solid foundation of sight words may be helpful.

**How are sight words taught?**

Many reading programs in the United States have educators instruct students on sight words using a drill and kill mentality. Often, sight words are taught in a decontextualized manner using some combination of flash cards and word walls in order to continually provide students with the repeated exposure and practice of sight words necessary to memorize the words and truly make them words students are able to identify on sight (Bear et al., 2004).

A prime example of the power of teaching sight words through the use of flash cards is a study conducted by Kourea, Cartledge, and Musti-Rao (2007). In this study, the researchers implemented peer tutoring in an urban classroom made up of primarily African-American third graders. The classroom used in the research was an inclusion classroom; more than half of the class population was also receiving special education remedial services.
The researchers' purpose was to examine the effects of total class peer instruction on sight-word acquisition, maintenance, reading fluency, and comprehension.

Prior to beginning the study, the researchers gathered baseline data using the Woodcock-Johnson III Tests of Achievement, specifically the subtests: Letter-Word Identification, Reading Fluency, Passage Comprehension, and Word Attack. The researchers taught both students and the two co-teachers in the classroom how to effectively peer tutor using a format of strict organization and execution. Peer tutoring sessions, as detailed by the researchers, paired students up, assigned a tutor and a tutee, and used flash card drills to memorize sight words.

The tutor presented the word cards one at a time and asked the tutee, "What word?" If the tutee responded correctly, then the tutor would provide praise and continue with the next card. If the tutee erred, then the tutor prompted his or her partner to try again. If the student responded incorrectly again or did not respond at all, the tutor would say the word (e.g., "Say father"). Tutors were encouraged to present word cards as many times as possible and to vary their social praise (e.g., "Great," "Super," "Fantastic," "Good job") (Kourea et al., 2007).
As peer tutoring was implemented, the researchers gathered data throughout the 60 tutoring sessions by testing sight-word recognition three times per week, and checking reading fluency and comprehension using a couple of DIBELS paragraphs targeted to the reading levels of the target students in the study. The post-test after the study utilized the same methods of data acquisition as the baseline collection. The researchers concluded that students increased their sight-word knowledge and generalized this new knowledge to contextual passages by demonstrating increasing fluency and comprehension (Korea et al., 2007).

However, recent research has suggested that forcing students to recognize sight words in a decontextualized environment is unproductive, since the goal of learning sight words is to improve reading fluency of authentic texts. Instead, sight words should be seen, visited, revisited, and grappled with within the context of more authentic forms of text, such as poetry, stories, passages, etc. (Bear et al., 2004; Gipe, 2006; Sousa, 2005). For example, Burleson (2002) teaches sight words to her first graders through poetry. Students spend each week practicing a new poem showcasing a plethora of sight words. Burleson’s students copy the poem into their poetry notebooks and revisit it during free reading time in the classroom. She finds that students possess more confidence reading the sight words within the
context of the poems than they do by simply reading the words off of flash cards.

Either technique, or some combination thereof, is employed in classrooms which support the direct instruction of sight words to students.

**How can students be engaged and motivated?**

Since many schools teach sight words through flash card drills, students often become quickly disinterested in sight word lessons. Maxwell asserts that it is the educator's duty to "serve a diverse clientele" in the classroom (2005, p.28). A teacher's goal is to get his students excited about learning (Sugar & Sugar, 2002). Studies have shown that the more engaged a student is with material, the more time he spends on task, which will lead to increased achievement (Etuk, 2007). The task becomes, for the teacher, finding ways to motivate students.

While some students seem naturally enthusiastic about learning, many need their teachers to foster this enthusiasm. Essentially, individuals need instructors to inspire, challenge, and stimulate them (Long & Hoy, 2006). Whatever level of motivation students bring to the classroom will be transformed, for better or worse, by what happens in that classroom (Krapp, 2005).
Unfortunately, there is no single, perfect way of motivating students. Many factors affect a given student's motivation to work and to learn: interest in the lesson content, usefulness of the subject in his life, the desire to achieve, and issues of self-confidence or self-esteem (Long et al., 2006; Strong, Silver, Perini & Tsculescu, 2003). In addition, not all students possess, or are motivated by the same values, needs, desires, or wants. For example, some students will be motivated by the approval of others, while others may be motivated by overcoming challenges (Richards, 2006).

Some of the general aspects of teaching have been identified to help enhance students' intrinsic motivation. To encourage students to become self-motivated independent learners, teachers can add some of these things to daily lessons: (a) Give frequent, early, positive feedback that supports students' beliefs that they can do well. (b) Create opportunities for all students to succeed by assigning tasks that are neither too easy nor too difficult. (c) Help students find personal meaning and value in the material. (d) Create an atmosphere that is open and positive. And, lastly, (e) Help students feel that they are valued members of a learning community (Richards, 2006).

Research has also shown that interjecting positive, everyday teaching practices can be more effective at countering student apathy than relying
solely on specific efforts to enhance motivation directly (Krapp, 2005). Most
students respond positively to a well-organized course taught by an
tenous teacher who possesses a genuine interest in students and what
they learn (Anderson & Anderson, 2006). Thus, lessons and activities
implemented in the classroom in an effort to promote learning will also work
to enhance students’ intrinsic motivation.

One of the best ways to motivate a student is to make him an active
participant in learning. Students learn by doing, making, writing, designing,
creating, and solving (Douglas, 2004). Passivity flattens students' motivation
and curiosity. Posing questions is a marvelous way to pull students away
from that passivity (Caram & Davis, 2005). Encouraging students to suggest
approaches to a problem or to guess the results of an experiment or simply
implementing small group work into each day are other simple methods to
enhance student engagement (Richards, 2006).

It is also important to work on incorporating instructional behaviors
that motivate students to want to dive into the curriculum. For example,
teachers should work to hold high but realistic expectations for students. A
teacher's expectations have a powerful effect on a student's performance
(Caram & Davis, 2005). If a teacher acts as though she expects her students to
be motivated, hardworking, and interested in the course, they are more likely
to be so. One effective method is to set realistic expectations for students when creating assignments (Anderson & Anderson, 2006). The standards set should be high enough to motivate students to do their best work, but not so high that students will inevitably be frustrated in trying to meet those expectations. To develop the drive to achieve, students need to believe that achievement is possible.

It is also the teacher’s responsibility to help students set achievable goals for themselves. Failure to attain unrealistic goals can disappoint and frustrate students. A teacher should encourage students to focus on their continued improvement, not just on their grade on any one test or assignment. A positive way to increase motivation and cut down on unnecessary stress is to merely inform students what they need to do to succeed in class. A teacher shouldn’t let her students struggle to figure out what is expected of them (Long & Hoy, 2006). An effective way to do this is to reassure students that they can do well in the class, and tell them exactly what they must do to succeed.

Most importantly, a teacher needs to be enthusiastic about the material she teaches. A teacher’s enthusiasm is a crucial factor in student’s intrinsic motivation. If a teacher becomes bored or apathetic with subject material, students will as well (Long & Hoy, 2006). Usually, a teacher’s enthusiasm
comes from confidence, excitement about the content, and genuine pleasure in teaching (Anderson & Anderson, 2006).

Lastly, a teacher can improve motivation in the students by structuring the course to motivate the students. One way is to work from students' strengths and interests (Strong et al., 2003). First, find how students feel about the subject matter and what their expectations are, then attempt to create examples or assignments that relate the class material to students' interests and experiences.

Can games foster student engagement?

There is a clear link between higher levels of engagement and learning through the use of games (Akinsola & Animasahun, 2007; Coulter, 2003; Etuk, 2007; Maxwell, 2005; Sugar & Sugar, 2002; Williamson et al., 2004). Brendzel asserts that motivation is the foundation and starting point of exemplary education, and “games [are able] to provide natural motivation” (2004, p.32). Coulter expands on this notion by describing the potential of games as being able to “develop students’ abilities... and to engage students in creative and critical thinking” (2003, p.15). Since children naturally create games as they grow to assist them in comprehending the world, it is only logical that
educators tap into this natural proclivity in students to engage them as they learn (Williamson et al., 2004).

In particular, games can be used as a strategy to engage and motivate students to explore literacy. Since literacy refers to students' ability to grapple with text, it is important that, when attempting to assist students in exploring literacy, authentic forms of text must be used (Roberts, 2005). Thus, as long as they employ authentic forms of text, games can help students "achieve literacy, increase overall academic performance, and enhance their enjoyment of reading" (Maxwell, 2005, p.28). If designed correctly, teaching sight words in context through games has the potential to engage students as they learn and practice the words.

While there has not been much research conducted using games to teach literacy, there are multiple studies focusing on improving student engagement in other subject areas, such as mathematics. For example, Van Eck (2006) conducted a study focused on the effect of combining instructional agents into math games, and how these games could affect the attitude of students toward mathematics as a subject matter. The researcher was interested in determining if competition in the games was a factor in either how often the students turned to the instructional agents in the game or on how students' attitudes toward mathematics changed (Van Eck, 2006).
The researcher conducted his study using a video game in which the student was asked to assist her aunt and uncle in redecorating a room. The student was prompted to use tools in the game to take measurements and make calculations to determine the dimensions of a room and how much paint and wallpaper would be necessary to refurbish the room. In some versions of the game, the student was able to “contact” the aunt and uncle for assistance. In another version, the student was pitted against a computer adversary; the student had to race against this digital adversary to see who could finish the room first. The control group was not given a game at all, but a series of word problems and black and white shapes. The student was to determine the area and perimeter of the shapes in a decontextualized setting (Van Eck, 2006).

The researcher concluded that the use of the instructional agent (the aunt and uncle) decreased anxiety about mathematics. Students also sought help more often in the competitive situation, than in the standard, non-competitive mode. It was also implied that when seeking help, learners tend to want to engage with a persona, not just textual information. As long as there was access to meaningful assistance, students possessed less anxiety toward the subject matter in comparison to the control students. This study shows that using games in the classroom has the potential to reduce anxiety
toward a subject, which may lead to increased motivation and engagement (Van Eck, 2006).

Another influential study showing how games have the ability to increase student attitudes toward, and engagement with, mathematics was conducted by Akinsola and Animasahun (2007). The study utilized computer simulation games introduced to a sample of high school seniors in place of normal lecture-style mathematics instruction. This sample was compared to a control sample that was taught the same material in a more traditional classroom style. The purpose of the study was to determine if students who learned through the use of simulation games were more motivated to learn mathematics and if that increased level of motivation led to higher academic achievement than the control group (Akinsola & Animasahun, 2007).

Of the two researchers in the study, each chose a separate school. Each administered a pre-test on basic mathematic skills on the same day; on that day the students were also asked to complete a questionnaire about attitude toward mathematics. Then, one researcher taught for three weeks in the classroom using the simulation games. The other researcher taught traditional lecture style in the classroom of the control school for three weeks as well. At the end of the study, both groups were then given a post-test and attitude questionnaire similar to the pre-test (Akinsola & Animasahun, 2007).
The researchers concluded that simulation games improved both students' attitude toward and achievement in mathematics. The researchers believe that it is the teacher's responsibility to cultivate motivation for a subject matter in his or her students. One effective way to do this is through the use of simulation mathematics games. The study supports the idea that using games is an effective way to teach (Akinsola & Animasahun, 2007). If a student is more engaged during lessons, it is much more likely that learning will take place.

However, effectively engaging students is not the sole purpose that games should be employed in the classroom. The use of constructivist learning, through games, especially in the primary grades, has been found to support the construction of meaning in young minds (Kamii & Kato, 2005; DeVries & Goncu, 1988).

Kamii and Kato (2005) conducted an influential study in Japan where they observed a class of 14 kindergartners while playing a card game in groups of three. The game involved having students place the cards in numerical order. The children were followed up in first grade, and it was found that development in one area of logico-mathematical knowledge stimulates development in other areas. This means, simply, that when students played math games in which they had to manipulate materials, they
were constructing meaning – not just about what they were doing but also making connections and stimulating other areas of the brain to create broader and deeper meaning of mathematical concepts. The findings suggest that, for teachers, it may be better to provide "natural" play activities that encourage children to think logico-mathematically than to conceptualize specific standards for primary grade mathematics education (Kamii & Kato, 2005).

Supporting this notion of meaning making through games, DeVries and Goncu (1988) conducted research comparing 40 preschoolers from both constructivist and Montessori programs. Both groups were monitored playing a board game. The researchers then analyzed and compared social-cognitive development of both groups. They concluded that the interpersonal negotiating strategies, conflict management, and cognitive ability displayed by the students from constructivist programs was much more advanced than students from the Montessori programs (DeVries & Goncu, 1988). Thus, students who spend time working together in groups and playing games are more advanced in social and cognitive competence.
Chapter Three

Methodology

Introduction

This study was designed to investigate whether teaching first grade students sight words through the use of teacher-created games would engage students, and lead to higher levels of sight word retention and reading fluency scores.

Participants

The research was conducted in a first grade inclusion, co-taught classroom in an urban school district in Upstate New York. The researcher was an intern in the classroom and collaborated with both the general education teacher and the special education teacher to design and implement the classroom's reading and math curriculums.

In addition to the regular whole-class lessons, two days a week, the class was divided into four small groups of six to seven students. These groups were heterogeneously organized, and remained constant for the duration of the research. For one hour each day, in two half hour blocks,
student groups circulated to different stations around the room. The researcher used this small group time to implement her sight word games.

In the researcher’s classroom, there are 26 students ranging from ages five to eight. All of the students qualify for free lunch. All students in the classroom were having difficulties recognizing Dolch First Grade Sight Words. Most of the students had below grade-level reading fluency scores. A smaller sample of nine participants was selected for the purpose of the study. The nine participants were selected randomly via pulling names out of a hat. Once the students were selected, the researcher double checked to ensure the sample was diverse, meaning that it contained at least one male and one female student and at least two students in each reading ability level – low, middle, and high. If the sample was not diverse, the researcher started over and drew a new random sample of nine students until the sample contained a diverse selection of participants.

Of these participants, two are male and the other seven are female; one is Hispanic, six are African American, and two are Multi-racial. The participants represent a wide array of reading levels; according to the Developmental Reading Assessment (DRA), the participants ranged in
reading level from one to ten, with one being an emergent reader and ten being a proficient reader.

**Baseline Data Collection**

Following approval by the Institutional Review Board and formal permission to conduct the research granted by the school principal, the researcher obtained informed consent from each student, and her legal guardian, participating in the study. A letter was distributed to each legal guardian explaining the research and requesting permission to use the data collected from her child’s participation in the study. (Please refer to Appendix I) The students were then informed by a verbal address in which each participant gave her own consent to be involved in the study by signing the consent form. (Please refer to Appendix I) All participants and legal guardians were assured that confidentiality was maintained; all names were removed from data collected and pseudonyms were assigned.

After consent was obtained, the researcher collected baseline data from a recent Developmental Reading Assessment (DRA) conducted with the students in the classroom. The DRAs were conducted during one-on-one reading conferences as children read specially selected assessment texts. A set of 20 stories, which increase in difficulty, were used for the assessment. The DRA evaluated two major aspects of reading: accuracy of oral reading and
comprehension through reading and retelling of narrative stories. The data the researcher used from the DRA was each participant's overall reading level and fluency score.

In addition to the DRA scores, prior to implementation of the sight word game intervention, the participants were individually tested on fluency using a reading passage which included a random sampling of ten sight words from the kindergarten sight word list with which the students were already familiar. To determine the fluency score, the researcher timed how long it took the student to read the entire passage; the researcher recorded how many words the participant read correctly from the passage. The researcher then calculated the average correct words per minute read based on this information using this formula: words read correctly / time. (Please refer to Appendix F) This fluency score was used in conjunction with the DRA scores to compare how students' fluency scores changed throughout the course of the study.

Description of Sight Word Games

For the eight weeks of data collection, the entire class population played the games in small groups of six to seven students. Each group played the sight word game during one thirty minute session each week. The
participants in the study were evenly distributed among the four student
groups. All groups played the same game each week for the same amount of
time.

After the researcher conducted a review of the literature, she found
that many students have difficulties learning sight words when the words are
taught out of context, such as seeing the word isolated on a flash card.
Keeping this in mind, the researcher created three separate games which
utilized the same game cards. The game card design placed each sight word
within a sentence at the bottom of the card. Then, each sentence had an
accompanying illustration (Sample in Appendix B). Each word introduced
was used in two game cards! Twelve game cards were used per week,
introducing six new words to the students each week.

After creating these game cards, the researcher developed three
individual games which all utilized the same type of game cards. The first
game was a board game. On each square of the game board was written one
of the six sight words for the week. Students were instructed to draw a game
card, read it aloud to the group, repeat the underlined sight word in the
sentence, and then move her game piece to the next square on the game
board with that word. The first student to reach the last square was the
victor. (Please refer to Appendix C)
The second game created was entitled Gumball Color. Each student was given the same coloring sheet depicting a gumball machine full of uncolored gumballs. In turn, each student drew a game card, read the sentence, repeated the underlined word, and then rolled a six-sided die. The student then colored in the number of gumballs indicated by the die roll. The student who colored in all of her gumballs first was the winner. (Please refer to Appendix D)

The third game designed was a derivation of Bingo. Each student was assigned a different three-by-three laminated Bingo board with the sight words for the week filled into the nine-squares. In turn, students drew game cards, read the sentence, and then repeated the underlined sight word to the group. Then, each student marked off the box with that word using a dry erase marker. This pattern continued until a student had marked off three words in a row. That child was named the victor of that round and marked on a score chart. Then the students erased the Bingo boards, traded with another student, and the next round began. The overall winner was the student who had the most overall Bingos by the end of group time. (Please refer to Appendix E)
All three games were implemented and rotated throughout the eight weeks to avoid students becoming bored with one single game. However, the same game was used with all groups throughout a single week.

**Implementation of Intervention**

During the first week, the entire class played a game using ten randomly selected kindergarten sight words in thirty minute blocks. During this week, as part of the intervention time, the researcher taught each group a mini-lesson on game playing etiquette in addition to the rules of the game. This first week implemented review sight words in order to acclimate the students to the idea of playing games to work with sight words.

On Monday of each subsequent week, seven weeks in total, the participants were individually tested using flashcards on the six first grade sight words to be incorporated in the game for the week. Immediately afterward, the participants were tested on fluency and sight word recognition in context using a reading passage which incorporated the new sight words for that week in addition to any sight words introduced in the prior weeks. To determine the fluency score, the researcher timed how long it took the student to read the entire passage; the researcher recorded how many words the participant read correctly from the passage. The researcher then
calculated the *average correct words per minute read* based on this information using this formula: words read correctly / time. The researcher also kept track of which sight words the student read correctly to determine percentage of sight words retained from week to week. (Please refer to Appendix F)

As the research was conducted, during the classroom small group time, the students played one of the three sight word games detailed above. Each week, the students worked with six new sight words from the First Grade Dolch Sight Word List. (Please refer to Appendix A) During this game time, the researcher monitored engagement of the participant students using a checklist. (Please refer to Appendix G) Using the Student Engagement Checklist, the researcher checked for each of the target behaviors detailed in the Checklist Key every five minutes. If the participant was displaying the target behavior, she received a tally mark. Thus, during the half hour block, a participant was able to earn a maximum of six tally marks in each category. The researcher designed this checklist to be quick and efficient in order to have more time to focus on running the small group time while still effectively monitoring student engagement. The checklist also has a section for comments so the researcher could easily make field notes directly on the checklist as she was monitoring engagement.
Concluding the Study

The intervention continued for eight weeks in total – the first week to introduce the students to the new routine, and seven subsequent weeks of intervention working with the first grade sight words. At the completion of the study, the students had worked through the entire first grade sight word list. (Please refer to Appendix A)

At the conclusion of the study, each participant was individually tested for recognition and retention using flash cards of all the sight words included in the study. A reading passage including all sight words was used to test sight word recognition and retention of sight words in context, in addition to testing fluency scores. The fluency scores and sight word retention rates were determined using the same method employed throughout the study.

In addition, each participant also completed a questionnaire exploring his experience and impression of the sight word games. (Please refer to Appendix H) This questionnaire was designed to gather information from the participants on whether they believe the sight word games were effective and/or engaging. This information was used in conjunction with other data to test whether participants who enjoyed the games improved more than participants who did not enjoy the games.
Data Collection

The following table shows the triangulation of the data.

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</table>

Data Analysis

To analyze the data collected, the researcher examined each participant’s assessments individually. Using Microsoft Excel, the researcher graphed each student’s fluency scores in words per minute over the eight weeks of data collection to look for general improvement. Then, also in Excel, the researcher graphed the student’s sight word retention rate, represented as
a percentage, for the duration of the study, again looking for a general trend. Last, the researcher graphed the student's engagement level, as measured by the Student Engagement Checklist. This procedure was repeated for each participant.

With the fluency and retention rates graphed, the researcher was able to determine which and how many participants improved, in what areas, and to what extent. The researcher then compared this data with the engagement graphs, to determine if students who were more engaged demonstrated greater improvement than less engaged students. At this point in time, the researcher also compared the numerical data with the student perceptions of the sight word games, as measured by the Student Questionnaire, to determine if students who enjoyed the games and believed they learned more sight words displayed more improvement than other students who did not enjoy the games.

These findings were then compared to the researcher's field notes to ensure that the numerical findings coincided with the researcher's daily anecdotal notes. From this information, generalizations were made about the effectiveness of teaching sight words through a gaming environment on improving fluency and sight word retention in first grade students.
Generalizations were also generated on whether increased levels of engagement and enjoyment lead to greater strides in academic achievement.

The researcher then looked at the initial recognition of the sight words, as measured through the sight word flash cards and sight words in context, with a two-fold purpose. First, she compared recognition rates between the flash cards and sight words in context to determine whether students were more apt to recognize the words in a decontextualized or contextualized situation. Second, she compared the recognition rates each week to the subsequent retention rate of those words, to determine if students were memorizing the new words, or whether they were already familiar with the words introduced. The researcher then used this information to create generalizations about student preferences when reading sight words and how much potential for academic growth each student possesses when working with sight words.

The generalizations made for this group of participants may or may not be similar for another group of first graders using sight word games. The data presented and analyzed are reliable and valid for the researcher's classroom in an urban elementary school in Upstate New York. However, the findings can not be generalized to all first grade classrooms.
Chapter Four

Findings

Introduction

This study was designed to investigate whether teaching first grade students sight words through the use of teacher-created games would engage students, and lead to higher levels of sight word retention and reading fluency scores. The researcher used a variety of data collection tools, including fluency passages, sight word flash cards, an engagement checklist, a student questionnaire, and field notes, to test whether the sight word games had an impact on students’ academic achievement and engagement. The data was then analyzed both qualitatively and quantitatively, and the following generalizations were derived from the findings.

Generalization #1: Teaching sight words through games does positively impact sight word acquisition and sight word retention levels in students.

Since participants were introduced to six new sight words each week, initial recognition of the sight words was tested each week using both flash cards and the words in the context of a fluency paragraph. Occasionally,
some participants recognized more words when reading from the flash cards or more from the paragraph. Since the purpose of the study was to teach students the sight words to improve their reading, not just to recognize the words in a decontextualized manner, the best score was used for each participant from each individual week. The number of words initially recognized was then tallied for each participant and converted into a percentage referred to as the *initial sight word recognition rate*.

At the conclusion of the study, the participants were tested using both flash cards and a reading paragraph incorporating all 41 First Grade Dolch Sight Words used in the study. Again, some participants correctly identified more words during the flash card test, while others scored higher when tested using the paragraph; the highest score was used on a case by case basis. That score was then converted to a percentage and referred to as the *final sight word retention rate*.

These two scores were then compared. Holistically, the participants learned and retained more words than they originally knew. The class average increase from initial recognition rate to final retention rate was 26 percent. The greatest growth was achieved by Student 4, who displayed a leap of 38 percent. Eight of the nine students displayed increased scores.
Student 9, however, did not show improvement simply because her initial sight word recognition score was already 100 percent.
Generalization #2: Teaching sight words through games does not appear to impact reading fluency in students.

Fluency paragraphs were used at the beginning of the study, each week during the study, and at the conclusion of the study to test for participant fluency scores. The researcher timed each participant as he read, and then calculated the correct number of words read per minute (wpm). Then, the fluency scores were analyzed for improvement.

Overall, each student’s fluency scores seemed to fluctuate from week to week. Even though the scores fluctuated, the deviations were relatively small in comparison to the average fluency score for each student; looked at generally, each student’s fluency scores remained relatively constant. As notated in the researcher’s field notes, both the school-based teacher educators in the researcher’s classroom and the literacy specialist at the researcher’s school stated, from their own experience, that they rarely see an increase in fluency scores among first graders unless the same selection of text is repeated by the student. Perhaps the lack of increase in the fluency scores could be attributed to the use of a different fluency paragraph to test the participants each week.
### Reading Fluency Scores (in wpm)

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<th>Student</th>
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### Reading Fluency Scores

![Graph of Reading Fluency Scores](image-url)
Generalization #3: Students recognize more sight words in context than in a decontextualized environment.

Participants were tested for both sight word recognition and sight word retention using two methods: flash cards and sight words within the context of a fluency paragraph. Each week, the researcher switched the order the participants were tested on the new sight words - one week each participant would read the words off the flash cards first, then proceed to reading the fluency paragraph, while the next week the participants would read the paragraph before reading the sight words from the flash cards. This method was employed to ensure that participants were not recognizing more sight words from a data collection tool simply because of order.

Overall, 21 percent more sight words were identified correctly when read in context. This derivation is most likely attributed to the ability of the participants to employ reading strategies, such as context clues, when reading from the paragraph. As documented in the researcher's field notes, many participants had difficulty reading the sight word could when tested using flash cards. Most read the word as cloud. However, when the sight word was encountered within the fluency paragraph, five of the participants who had read the word incorrectly on a flash card were able to correctly identify it in context.
Generalization #4: Teaching using sight word games is an engaging strategy, for both students and teachers.

Participant engagement, as recorded during the sight word games, was evaluated on four criteria – focused on game, cooperating, on task, and participating – using the student engagement checklist (For definitions of the criteria, please see Appendix G). Each week, participants were able to earn a maximum of six points in each criterion category, with the potential for attaining a total maximum score of 24. Each participant’s engagement scores were tallied and formulated into graphs (Please see Appendix J for complete graphs for each individual participant). Then, an average for each week for all nine participants was calculated (Please refer to the graph below). The overall average score of all participants from all game sessions was 19.3.

The researcher also noted that there is a correlation between enjoyment of a particular game and engagement levels in the participants. As the participants asserted on the student questionnaires, the Gumball Color game was the favorite among the focus group members (seven of the nine participants voted for it). This game was played during Weeks Four, Five and Eight; these were also the weeks when the participants displayed the highest levels of engagement, as seen in the graph below.
As documented in the researcher's field notes, the researcher noted that she spent less time redirecting and refocusing students during the sight word games in comparison to other times throughout the day. In addition, the researcher spent less time on behavior management since most students were following directions and participating actively in the games a majority of the time.

Also documented in the researcher's field notes were observations about the researcher herself. The researcher was more awake, more attentive,
and happier while implementing the sight word games, in comparison to the
time she spent teaching sight words through flash cards and word walls prior
to beginning her study.

*Generalization #5: Sight word games excite and motivate students of all reading ability levels.*

At the conclusion of the study, each participant was administered a
student questionnaire. The questionnaires were anonymous; the participants
were told that the researcher would not know which questionnaire each
participant filled out. They were encouraged to be completely honest. All
nine of the students answered yes to the question, "Did you enjoy playing the
sight word games?"

The researcher’s field notes supported this data. There are numerous
eamples of the participants cheering when it was time to play the sight word
games. At least one point in time during the study, each participant told the
researcher that he or she either liked playing the games, the games were fun,
or asked when the games would be played again.

Most groups spent the half hour of game time huddled close to the
game, head bent together, talking excitedly. Most students smiled as they
played; there were occasions of laughter. Overall, the students were observed generally expressing signs of enjoyment during game time.

While the sight word games were specifically designed for students who were struggling with sight words, the games still have the potential to motivate high level students as well. As shown in the prior findings, the high ability participants in this study, in particular Student 9, were unable to display much of an increase in academic ability within the confines of this study due to the glass ceiling. However, as documented in the researcher’s field notes, these students still benefited from the sight word games. Students need to have the chance to academically shine once in a while. The gaming environment provided these participants with the opportunity to feel competent and successful in relation to reading.

For example, of all the participants, Student 9 was the one who constantly asked the researcher when it was her group’s turn to play the games. She also consistently expressed her excitement verbally when it was her turn to play each week.

The high level participants, as they played the games, took upon themselves, entirely without prompting, a tutoring role, and gently assisted any other students in their respective groups who were having difficulty reading individual words on the game cards. Afterwards, these participants
also displayed pride in their ability to know the sight words and read well.

As Student 6 said to the researcher one day after groups, “I like [playing the sight word games] because I know so many words!” When informally interviewed, these participants also asserted that they feel more motivated to read because the games showed them that reading can be fun.

Conclusion

Sight word games were found to be a worthwhile strategy for teaching sight words in this specific classroom. All generalizations were crafted and supported using data gathered from a small focus group in the researcher’s classroom. These finding apply specifically to these students and cannot be broadly generalized to all students, classrooms, or situations. Recreation of this study may lead to differing results.
Chapter Five

Implications

Introduction

For the purpose of this study, the researcher implemented sight word games for eight weeks. During this time, the researcher assessed students on sight word recognition, sight word retention, reading fluency, engagement levels while playing the games, and attitudes toward the games. The use of sight words games was found to be an effective method for improving sight word recognition and retention in this group of students. It was also found to be an enjoyable, engaging and motivating classroom activity for all students and teachers involved. The following implications are drawn from the findings reported and detailed in Chapter Four.

Implication #1: Teachers should consider using games in the classroom.

As evidenced by the data, games are an enjoyable, engaging and motivating teaching strategy in the classroom, in addition to being effective at teaching academic skills. While the study was done with younger students, it
is the researcher's belief that students of all ages could benefit from playing games in the classroom.

The teacher, when implementing games, must take into consideration some of the details necessary to integrate games into the curriculum. Especially when it comes to literacy games, there simply is a lack of resources available which provide pre-made games for teachers. Because of this, it may be difficult to find resources which fit neatly into a teacher's curriculum; teachers may need to design their own games. It takes time, materials, and a certain level of creativity to develop and create games. However, once the games are created, they can be used repeatedly, throughout the school year and with each new class. Plus, games are great to share between colleagues within a school. Thus, when deciding whether to use games in the classroom, a teacher must consider whether the benefits to the students outweigh the extra time and energy required by the teacher to implement.

**Implication #2: Games can be a lesson-based instructional tool, not merely an addendum to the curriculum or a method for review.**

Often, teachers seem to only utilize games as something outside of curriculum. Many of the resources which provide game suggestions to teachers focus on using games as a tool to review for an upcoming
assessment, or as an extra activity for students to engage in when they complete an assignment early. As shown in the researcher's findings, the sight word games were effective at teaching academic knowledge to students. If crafted correctly, games have the potential to teach and reinforce academic concepts within the confines of the standard curriculum.

**Implication #3: Games, especially with young students, can teach social skills in addition to academic skills.**

When a student is actively participating in game play, there is more going on than just learning. The student is interacting with the other students playing the game. The very social nature of game play fosters the learning, practicing, and internalizing of positive social skills in students.

Children are not born knowing how to work well with others; it must be learned. In the primary grades, students are still working on beginning social skills, such as listening, sharing, and cooperating. For a student to successfully play a game, these social skills must be utilized. Playing games provides a safe and fun atmosphere for practicing socializing in positive ways with other students.
Summary

This research was a small study which took place in a first grade classroom in an urban school district in Western New York. The results of this study are solely presented from a small focus group of nine students, and the data cannot be generalized to all students. When conducted with another group of students in another classroom, the same results may or may not occur.

There is no accurate way to determine to what extent implementing the sight word games affected student retention rates of the sight words, since reading lessons were conducted each day which may have contributed to the growth displayed by the participants. To truly determine how effective playing sight words games can be, this study should be conducted with a much larger populations of students, over a longer period of time under more controlled conditions.

Even with its numerous limitations, this study has shown that for the short period of time the sight word games were implemented in the classroom, the participants did learn and retain more sight words than they previously recognized. In addition, it is evident that the sight word games were enjoyable and engaging to the participants involved. The researcher
believes these finding are relevant to any teacher searching for a fun, engaging and motivating method to teach students sight words.
References


APPENDICES
APPENDIX A
### Dolch First Grade Sight Words

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APPENDIX B
I go home after school.

We ride the bus, again.
We ask for a cupcake.

Your shirt is as blue as the sky.
APPENDIX C
Directions

- Place your “dude” on the **START** square.
- On your turn, draw a card.
- Read the sentence on the card aloud.
- Read the underlined sight word aloud.
- Find the next square in the line that has the same sight word as the underlined sight word on your card.
- Move your “dude” to that square.
- The first person to reach the **END** square wins!
Appendix C – Sight Word Board Game (Sample Board Game)
APPENDIX D
Appendix D – Gumball Color (Directions)

**Directions**

- On your turn, draw a card.
- Read the sentence on the card aloud.
- Read the underlined sight word aloud.
- Roll the die and read the number.
- Color that number of gumballs on your Gumball Coloring Sheet.
- The first person to color all the gumballs wins!
Name ____________________________
Appendix E – Sight Word Bingo (Directions)

**Directions**

- Have your Bingo card, dry erase marker, and felt eraser ready.
- On your turn, draw a card.
- Read the sentence on the card aloud.
- Read the underlined sight word aloud.
- *Everyone* listens to the word and crosses it off on their own Bingo sheet.
- If you get three words crossed off in a row, raise your hand! You are the winner of the round!
- Erase your board and trade with a friend.
The person who gets the most Bingos when group time is over wins!
Appendix E - Sheet Word Bingo (Sample Bingo Cards)
BINGO
It is a very hot day. I ask my dad if we have any ice cream. He gives me an ice cream cone. It is as cold as snow. After I eat it, I do not feel hot. I hope I can have a cone again soon.
Appendix F – Sample Fluency Paragraph (Teacher Copy)

Student 1

It is a very hot day. I ask my dad if we have any ice cream. He gives me an ice cream cone. It is as cold as snow. After I eat it, I do not feel hot. I hope I can have a cone again soon.

___/47  Time:_____

Student 2

It is a very hot day. I ask my dad if we have any ice cream. He gives me an ice cream cone. It is as cold as snow. After I eat it, I do not feel hot. I hope I can have a cone again soon.

___/47  Time:_____

Student 3

It is a very hot day. I ask my dad if we have any ice cream. He gives me an ice cream cone. It is as cold as snow. After I eat it, I do not feel hot. I hope I can have a cone again soon.

___/47  Time:_____

72
APPENDIX G
## Appendix G – Student Engagement Checklist

### Student Engagement Observation Checklist

Date Range ___________ Week _______ Measured every 5 minutes w/ a Tally Mark

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<th>Focused on Game</th>
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<th>On Task</th>
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### Key

**Focused on Game:**
- facing toward game board
- eyes on game or speaker
- not talking when it is not his/her turn

**Cooperating:**
- taking turns
- not fighting or arguing
- not touching game materials when it is not his/her turn

**On Task:**
- knows when it is his/her turn
- paying attention (can repeat back a sentence read by another student when asked)

**Participating:**
- following game directions
- following teacher directions
- actively playing game
APPENDIX H
Appendix H – Student Questionnaire

Directions: Think about how you felt during the sight word games. Color ✅ for yes or color ❌ for no to answer the questions.

1. Did you like playing the sight word games?

2. Were the game cards too hard to read?

3. Were the game cards too easy to read?

4. Do you know more sight words after playing the games?

Circle the game you liked the best:

Board Game Bingo Gumball Color
APPENDIX I
Appendix I - Letter of Parental Permission

Dear Parent or Guardian,

Hello! My name is Amanda Tibbatts. I am a certified teacher who has been accepted as an intern into your child’s classroom as part of the CIMP Program. I would like to introduce myself to you since, as part of the program, I will be working with the students fifteen hours a week for the rest of the school year. In addition to teaching, I am earning my Master’s degree in the Childhood Education program at SUNY College at Brockport. As such, I will be conducting a research study in the classroom for my Master’s Thesis on literacy and reading. The purpose of this research is to determine whether teaching the First Grade Dolch Sight Word List to students in a gaming environment will impact memorization and retention levels of these sight words, leading to higher fluency levels in the students.

As part of my work in the classroom, I am excited to share that in small groups, I will begin playing some reading games with the students in the afternoon during our classroom small group time, in addition to the daily Reading lessons which are already a part of the school day. These games will focus on improving your child’s recognition of sight words. Sight words are words which appear often in written text, such as the and there.

For my study, I will be briefly testing students once a week on his/her sight word recognition using some flash cards and his/her reading fluency using a short passage your child will be asked to read. Your child will also be monitored during our small group time to measure how engaged each student is while playing the games. At the completion of the study, each student will be asked to complete a short questionnaire about the small group experience.

A possible benefit of the study is that professionals may have a better understanding of ways using games to teach sight words may increase student retention of sight words and student reading fluency levels. There are no anticipated personal risks due to participation in this study.

Any information collected from this study will be completely confidential. Except for this consent form, all other documents will be coded with pseudonyms.
Your child’s name will not appear on any data I collect. The results of this study will in no way affect your child’s grades or school standing.

Participation of your child is voluntary; you may choose not to have data collected from your child for the purposes of this study. No penalties will arise if you decide at any time you do not want your child to participate. During the weekly testing, if your child is not involved in the study, he/she will simply be given additional time to complete the daily assigned seatwork. Regardless of participation status, all students in the classroom will have the opportunity to participate in playing the reading games.

Please return this form to school if you agree to allow me to gather data on your child. If you have any questions, comments, or concerns about this new addition to your child’s reading instruction, please feel free to contact myself or my research advisor from the Dept. of Education and Human Development at SUNY Brockport:

**Primary Researcher:**
Amanda Tibbatts
585-245-2110
atibb1@brockport.edu

**Faculty Advisor:**
Dr. Betsy Balzano
585-395-5549
bbalzano@brockport.edu

I appreciate your support and look forward to working with your child throughout the rest of the year.

Sincerely,

Amanda Tibbatts

I am 18 years or older. I understand the information provided on this form and agree to allow confidential data to be collected on my child for research on sight words.
Appendix I – Statement of Oral Informed Assent

_Student’s name_, I am excited to tell you that beginning soon, in small groups, we will start playing some reading games, in addition to our Success for All reading time. In the games, we will be learning and practicing our sight words. I want to see that if by having fun playing games students will be able to learn sight words easier and also see if by knowing more sight words students can be better readers. For me to find this out, each week I will need to ask you to read a few words on flash cards and then read a little story. Also, during our small groups, I will be looking and making some tally marks to figure out how into in the game you are. Then, when we are done playing all the games, I’ll ask you to answer a few questions on paper so you can tell me if you liked playing the games or not. I promise not to use your name on anything in my project, just what I find out about games helping reading. You can say yes or no to being a part of my project, and I promise not to be mad or upset. And, no matter what, you will still get to have fun and play games. Would it be okay if I used you as part of my project?

☐ Yes, I will be a part of this project.

☐ No, I will not be a part of this project.

Name ______________________________ Date ______________________________
APPENDIX J
Appendix J – Individual Student Engagement Graphs

Student 1 Engagement Scores

Student 2 Engagement Scores
Appendix J – Individual Student Engagement Graphs

Student 5 Engagement Scores

Week 8
Week 7
Week 6
Week 5
Week 4
Week 3
Week 2

Student 6 Engagement Scores

Week 8
Week 7
Week 6
Week 5
Week 4
Week 3
Week 2

Total Score

Focused on Game • Cooperating • On-task • Participating

84
Appendix J – Individual Student Engagement Graphs

Student 7 Engagement Scores

Week 8
Week 7
Week 6
Week 5
Week 4
Week 3
Week 2

Week

Total Score

Focused on Game • Cooperating • On-task • Participating

Student 8 Engagement Scores

Week 8
Week 7
Week 6
Week 5
Week 4
Week 3
Week 2

Week

Total Score

Focused on Game • Cooperating • On-task • Participating
Appendix J – Individual Student Engagement Graphs

Student 9 Engagement Scores

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<th>Participating</th>
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