The Impact of the Help Me 2 Learn Phonics Game in the Early Childhood Classroom

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ABSTRACT

The purpose of this study was to identify the strengths and weaknesses of the Help Me 2 Learn Phonics Game in the elementary classroom. This comprehensive study was conducted in two Title 1 public schools and one private Montessori school in Memphis, Tennessee. Teacher journals, attitudinal surveys, and pre and post phonics tests were included in the study to measure students' progress. Each set of students were scheduled time on the computer to practice phonics skills. The researchers found a significant increase in post phonics test scores after implementing the Help Me 2 Learn Phonics Game in the classroom. There was no statistical change found on the attitudinal survey. As a result of this study, researchers suggest that educators should incorporate computer phonics instruction into the classroom to improve phonemic awareness.

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Introduction

> In summary, deep and thorough knowledge of letters, spelling patterns, and words, and the phonological translations of all three, are of inescapable importance to both skillful reading and its acquisition. By extension, instruction designed to develop children's sensitivity to spellings and their relations to pronunciations should be paramount importance in the development of reading skills. This is, of course, precisely what is intended of good phonic instruction (Adams, 1990, p. 116).

Statement of the Research Problem

The purpose of this study is to identify the strengths and weaknesses of the *Help Me 2 Learn Phonics* game in the elementary classroom.

Rationale of the Study

Many students are entering the classroom today as unmotivated learners. Their reading skills are below grade level, and they test poorly on reading assessments that are given at the beginning of the school year. All of this leads to a decrease in the students' confidence in reading and their phonemic awareness. Teachers are also discovering that a number of their colleagues feel they have not had adequate experiences to be effective mentors. For example:

> One survey published in the journal *Teacher Education and Special Education* (1989) found less than ten percent of teachers had ever seen their professors demonstrate methods of reading instruction tailored to children's differing needs.

Fewer than five percent said that what they had learned about teaching reading actually related to what they did in the classroom (Pilafs, 1997, pp. 32-40).

For many years educators were taught using the whole language theory, but studies have shown that phonics instruction in the early grades should also be implemented. One way of doing this is by using phonics games. By incorporating the *Help Me 2 Learn Phonics* game, the researchers will determine if students will display higher test scores, increase their reading grade level or Zone of Proximal Development (ZPD), will be more intrinsically motivated, and display greater self-confidence.

Research Questions

Data for this study will be gathered to answer the following questions:

1. What are the strengths and weaknesses of the *Help Me 2 Learn Phonics?* game in the elementary classroom?
2. Will implementing the *Help Me 2 Learn Phonics* game improve phonics test scores?
3. Is there a change in attitude when the *Help Me 2 Learn Phonics* game is incorporated into the elementary school?

Literature Review

Hancock and Wingert state that phonics "which stresses teaching children the sounds of words dates to the 1700's. Since then, it has been eclipsed from tie to time." (1996, p. 2) Hancock and Wingert outlined the following history of phonics:

1700's - mid 1800's: Children are taught to read through memorization of the alphabet. Primary text: the Bible.

1783: Noah Webster publishes The American Spelling Book, used for almost 100 years.

Mid 1800's - early 1900's: McGuffey Readers prevail. Very phonics oriented.

1919 - 1920: Ginn and Co's Beacon Readers, an efficient and intelligent sequence of systemic phonics.

Late 1930's: Scott Foresman introduces the Dick and Jane series. John Dewey and others promote whole word reading. Emphasis on "site reading" a limited list of words and word guessing.

1955: *Why Johnny Can't Read* by Rudolf Flesch, attacks look-say instruction, urges a return to phonics. "We've thrown 3,500 years of civilization out the window," he writes.

1967: Jeanne S. Chall's *Learning to read: The Great Debate* endorses direct instruction in phonics.

1981: Twenty-six years after Why Johnny Can't Read, Rudolf Flesch publishes Why Johnny Still Can't Read.

1984: The federal commission on reading issues *Becoming a Nation of Readers*. "The issue is no longer, as it was several decades ago, whether children should be taught phonics, "the commission said.

1995: California's "ABC" laws require instructional materials to include "systematic, explicit phonics, spelling and basic computational skills." North Carolina and Ohio follow suit.

1995 - 1997: "Word Identification" programs in most Maryland school systems include phonics (1996, pp. 2-3).

Research

Brain research. The National Institute of Child and Human Development (NICHD) studies were conducted in 1965 to analyze how the reading process was developed. NICHD collected strong evidence that the ear did not understand that a spoken word like *cat* was divided into sounds, and that the sounds and letters could be related. The functions that divide and links sounds are processed to the language system in the brain (Lyon, 1997). "When readers are asked to imagine 'cat' without the 'kah' sound, they readily summon 'at.' The MRI photographs show the brains lighting up like pinball machines" (Shaywitz, 1996, p. 1). Reading to children frequently at very young age help foster early language development, rhyming, and provides a foundation in developing phoneme awareness (Lyon, 1997). When the brain understands where sounds are being processed, connections are being made. The MRI pictures, however, are different for people whose brains cannot process the sounds of a word. In the language center of the brain activity is not present, and blood flow is not occurring (Shaywitz, 1996).

"In *Science News*, 1999, other research suggests that brain disturbances affecting sound and visual perception may contribute to the severe reading deficits known as dyslexia" (Science News, 2000 p. 1). Since our brain has adapted to processing, it is natural for the brain to process sounds (phonemes) by putting them together so we can hear whole words (Shaywitz, 1996). In children, there are more than 50,000 nerve pathways which transmit sounds from the human voice through the ears to the brain.

Language is produced when the brain encodes the words; therefore, rearranging its brain cells into connections or networks (Fleming, n.d.).

> Neural Architecture for reading has been suggested by functional magnetic resonance imaging. Letter identification activates the extrastriate cortex in the occipital lobe; phonological processing activates the inferior frontal gyrus (Broca's area); and accessing meaning activates primarily the superior temporal gyrus and parts of the middle temporal and supramarginal gyri (Shaywitz, 1996, p.3).

Brain research indicated that language development for young children must be cultivated or it could be impaired or lost. (Fleming, n.d.) In learning to read, the new brain research illustrated that intensive phonics instruction was the best way to teach individuals how to read. (Shaywitz, 1996)

Scientific research on reading and phonics. When it comes to educational issues, reading methods have become a political topic (Handcock & Wingert, 1996). “The 1994 National Assessment of Educational Progress (NAEP) found that more than 40 percent of fourth graders cannot read at the most basic level, indicating that they could not understand the ‘overall meaning of the text’ or make simple inferences” (Palmaffy, 1997, p.1). The federal Government assist special education with 40 billion dollars a year, and half of the funds are targeted to children who have learning disabilities (Sweet Jr., 1997). When Jean S. Chall surveyed the entire body of research available in 1967, 1983, and 1996, she concluded that systematic phonics instruction was strongly confirmed by the research (Research Requiring Phonics, n.d.). NICHD researchers have found that reading failure and reading success was linked to how the classroom environment, and phonics

instruction was given. For example, when instruction clearly addressed the relations between letters and sounds, and provided readers with a literature-rich environment, reading was achievable (Lyon, 1997).

> In the late 1980's, Marilyn J. Adams (at University of Illinois at Urbana-Champaign) was commissioned by the U.S. Department of Education's Office of Education Research & Improvement (OERI) to survey the entire body of reading research. Her finial conclusion on p. 416 was: "In summary, deep and thorough knowledge of letters, spelling patterns, and words, and of the phonological translations of all three, are of inescapable importance to both skillful reading and its acquisition"…(*Research Requiring Phonics,* n.d., p. 1).

Snow, Burns, and Griffin stated in 1998, that a report from the National Research Council indicated that the prevention of reading difficulties was dependent upon the type of instruction children received (Quatroche, 1999). NICHD has conducted reliable scientific reading research for 30 years. NICHD recommended that teachers implement comprehensive systematic phonics (*Research Requiring Phonics,* n.d.).

Research on the effectiveness of phonemic awareness instruction. When students have been taught phonemic awareness skills, one can predict the success of their learning to read. Research findings include the following:

- Phonemic awareness is more highly related to learning to read than tests of general intelligence, reading readiness, and listening comprehension (Stanovich, 1986, 1993).
- The lack of phonemic awareness is the most powerful determinant of the likelihood of failure to learn to read because of its importance in learning

the English alphabet system or in learning how print represents spoken words, they have an extremely difficult time learning how to map those sounds to letters and letter patterns & 151; the essence of decoding (Adams, 1990).

- Phonemic awareness is the most important core and casual factor separating normal and disabled readers (Share & Stanovich, 1995).
- Phonemic awareness is equally important in learning to spell (The Reading Research Base, 2002, p. 10).

When phonemic awareness instruction is taught correctly, children learn how to notice, think about, and manipulate sounds in spoken language (Center for the Improvement of Early Reading Achievement, 2000, p.6). "Phonemic awareness instruction is most effective when children are taught to manipulate phonemes by using the letters of the alphabet" (The Reading Research Base, 2000, p15).

Phonemic awareness instruction makes a stronger contribution to the improvement of reading and spelling when children are taught to use letters as they manipulate phonemes than when phonemes are taught alone when children learn to segment sounds with letters, they learn to spell words (*The Reading Research Base*, 2002, p. 6).

Phonemic awareness instruction is most effective when it focuses on only one or two types of phoneme manipulation, rather than several types. Children who receive instruction that focuses on one or two types of phoneme manipulation make greater gains in reading and spelling than do children who are taught three or more types of manipulation (*The Reading Research Base*, 2002, p.15).

California Department of Education research also indicates that, “all young readers benefit from explicit assistance with phonemic awareness; at least one-fifth of them depend critically on it” (*The Reading Research Base*, 2000, p.15). Research indicates that for those students who fall behind in reading, opportunities to advance or catch up diminish over time. The teaching, therefore, of beginning reading skills are very important and must be purposeful, strategic, and grounded in the methods proven by effective research (Fitzsimmons, 1998, p. 1).

Phonics Background

Phonemic awareness and phonics instruction.

> With phonics the predominant instructional practice, illiteracy was almost unknown at the turn of the century among those who attended school. In 1910, the U.S. Bureau of Education reported, only 2.2 percent of school children between the ages of 10 and 14 in the U. S. were illiterate. Blacks had been forbidden to read under slavery and only four percent of blacks were literate in 1866. But by 1943, as Henry Bullock wrote in *The History of Negro Education in the South* (1967), literacy had risen to more than 80 percent among blacks who had attended school (Sweet Jr., 1997, p. 2).

Today in the twenty first century, phonics instruction and phonemic awareness is still the predominant beginning literacy instructional practice. The National Reading Panel stated that

> Phonemic awareness is the ability to notice, think about, and work with the individual sounds in spoken words. Before children learn to read print, they need to be taught how the sounds in words work. Children need to understand that

> words are made up of speech sounds or phonemes (*The Reading Research Base*, 2002, p. 4).

In order to translate letters into sounds, children would need to begin school with an understanding of the sound structure of words and the ability to combine these sounds in words (Smith, Simmons, & Kameenui, cited in Fitzsimmons, 1995).

> Children need the following prerequisite skills to begin reading. They understand that (a) words can be spoken or written, (b) print corresponds to speech, and (c) words are composed of phonemes (sounds). Beginning readers with these skills are also more likely to gain the understanding that words are composed of individual letters and these letters correspond to sounds. The 'mapping of print to speech' that establishes a clear link between a letter and a sound is referred to as alphabetic understanding (Juel, 1991, p. 2).

The individual letters of the English alphabet are abstract and meaningless by themselves. Meaning is finally realized when these sounds are blended together and words are produced (Lyon, 1997, p.2). National Research Council suggested that,

> English is an alphabetic language in which printed letters systematically, sometimes, represent phonemes. In order to grasp this fundamental principle of alphabetic literacy, children should acquire some degree of letter knowledge, including the ability to distinguish and identify the letters of the alphabet (The Reading Research Base, 2000, p. 5).

The National Reading Panel stated that every letter-sound should be explicitly taught. There is an overwhelming amount of research to support this idea. "If children do not know letter names and shapes, they need to be taught them along with phonemic

awareness" (*The Reading Research Base*, 2000, p. 5). We know that letters of an alphabet represent units of sound called phonemes; an understanding of these phonemes is the key to understanding the alphabetic principle (The Reading Research Base, 2000, p. 17). Importantly, the research from California Department of Education says that in order for children to understand how the alphabetic principle works, it is easy for them to add new letter-sound pairs to the working set of letters (*The Reading Research Base*, 2000, p. 10).

Phonics rules. According to the National Reading Panel (2000), "Phonics skills must be integrated with the development of phonemic awareness, fluency, and text reading comprehension skills" (Lin, 2001, p. 1). Developing skills in blending and manipulating phonemes permits many children to develop strong reading abilities who would otherwise struggle (National Institute for Literacy). Beginning phonics instruction is best taught when using a small set of consonants and short vowels. These spelling-sound relationships should be developed smoothly. By using this limited set of letters to build as many familiar words as possible, students will be amazed at how they can use phonics and understand that every letter matters (*Reading Research Based*, p. 10).

> Most languages of the world like English, Spanish, German, etc., contain considerably more than 65 unique syllables and the syllables do not follow a regular vowel-consonant pattern. In these languages, it is more efficient to use a symbol to represent a phoneme and assemble written words at the phonemic level. English, which has thousands of unique syllables, only contains between 39 and 47 phonemes. In Spanish, there is nearly perfect one-to-one correspondence between the letters and the phonemes. Spanish words sound the way they are

> spelled. This is what linguists call a "shallow orthography." English however, does not have one-to-one correspondence between letters and phonemes, and is an example of a "deep orthography" (Wren, 2001-00-00, p. 1).

To learn to read in a logography, students must memorize the whole symbol for each new word they learn to read. Reading in a logography system is often slow and laborious, and learning to read a logography takes a life time. The greatest weakness of phonics instruction is its dependence on constant instruction of feeble and abstract rules. Children must be taught and understand that there is some consistency between letters and sounds, but that consistency is sometimes limited (Wren, 2001-00-00, p. 6).

Phonemic awareness and language. The majority of the research on phonemic awareness has been done with children learning to read English as their first language (Reynolds cited in Mann, 1986, p. 2). There is also some research with children learning to read other languages as their first language. There are, however, only a few studies that deal specifically with phonemic awareness in the second language (Allan, 1997). A number of large-scale longitudinal studies indicate that phonological awareness can be taught in one's first language and can be taught at very young ages even before students begin to read (Blachman, 1994; Lundberg, Frost, & Peterson, 1988). The same studies also show significant positive effects of such training on a child's later reading ability. In a second language study Reynolds found that teaching English letter-sound correspondences to first and second year Japanese junior high school students resulted in great improvements in phonological, and specifically phonemic awareness. The students also scored higher on a test of phonological awareness than high school students who had four more years of English instruction (Reynolds, 1997). Finally, it appears that both

early first language and second language instruction are most likely to result in great improvements in phonological awareness (Reynolds, 1998).

Teacher Preparation

Importance of teacher preparation. Students rely on teachers to facilitate their computer activities. To ensure that their students receive quality learning experiences teachers must have "the training and support they need to help students learn using computers and the information superhighway" (Shields & Behrman, 2000, p. 8). As a result of having support in place in the classroom, the teacher can "customize and individualize curriculum according to needs and interests of learners" (Indicators for Measuring Progress, 2002, p. 6).

The importance of adjusting "teaching strategies according to children's needs" (Lin, 2001, p.3) cannot be overstated. "Some children need explicit, direct instruction in order to master the task" (Lin, 2000, p. 3) while other "children are able to learn the skills and strategies necessary for reading and writing through engagement in meaningful activities. Teachers must try to achieve balance between meaningful activities and skill practices" (Lin, 2000, p.3).

Lack of teacher education classes. Research has found that the method classes being taught in teacher education programs emphasize "theory over practice" (Palmaffy, 1997, p.7). Professors are not demonstrating "methods of reading instruction tailored to children's differing needs" (Palmaffy, 1997, p.7). Subsequently, teachers aren't equipped "to teach students to read," says Moats. They continually ask, "Why didn't anyone teach me these things" (Palmaffy, 1997, p.7)?

Also lacking in teacher education programs are classes that identify appropriate "software applications and technology supported practices that can be integrated effectively into the curriculum" (Shields & Behrman, 2000, p. 8). It is the responsibility of state and local agencies to "ensure that all teachers receive preservice and/or inservice training on how to integrate technology effectively" (Shields & Behrman, 2000, p. 9).

Teachers also need to be given the opportunity to observe successfully integrated models. Networking with other teachers has proved to be very effective for teachers in developing successful technology integration. Teachers should be given professional development credit for networking and collaborating with other teachers "to enhance classroom learning using computers" (Shields & Behrman, 2000, p.9).

Methods of teaching. No single method of teaching reading or vocabulary has been identified as being the most effective. Instead, using a combination of methods is recommended. Research has found that "vocabulary should be taught both directly-apart from a larger narrative or text-and indirectly-as words are encountered in a larger text" (Language Tune-Up Kit Phonics, p.1). Behavior science has concluded that "the direct instruction in alphabetic coding facilitates early reading" (Ponnuru, 1999, p.). Effective reading instruction was found to include phonemic awareness, phonics, guided oral reading and applied reading comprehension strategies. Specifically, research shows that explicit and systematic instruction on "manipulating phonemes significantly improves children's reading and spelling abilities" (Language Tune-Up Kit Phonics , 2000, p. 2). Adams and Bruck say, "Old instructional regimens should be replaced with highly integrated, meaningful, thoughtful, and self-gendering engagement with information and ideas" (Palmaffy, 1997, p. 7).

There is an ongoing argument over whether to teach using the traditional approach to reading, writing and arithmetic by using books and lectures in an environment where students are passive and expected to memorize and recite their lessons as opposed to the constructivist approach that "focuses more on cultivating student interest thru critical thinking and real-world applications and often involves problem solving in small groups" (Shields & Behrman, 2000, p.3). Computers can be used as tools to help in either the traditional or constructivist learning approach. The traditional approach uses more *drill and kill* practice while the constructivists approach "involves more interaction and feedback" (Shields & Behrman, 2000, p.4). For example, the traditional approach could allow students to see a project in another country that tells how students problem-solved their community problems. In contrast, the constructivist approach would take this further by allowing the students to interact with one another to create solutions together.

Computer technology can enhance learning in the classroom using either approaches whether it is to reinforce basic skills or to teach higher-order skills. "The strongest evidence of positive effects tends to be for constructivist applications (Shields & Behrman, 2000, p.4). The students' success is measured by their depths of understanding and not by their knowledge of basic skills.

*Teaching strate*gies. "Integrated Processing (Sundbye & McCoy, 1997) is a reading strategy for students who have some phonics skills but fail to integrate phonics with context clues for the meaningful pronunciation of unknown words" (Pemberton, 2003, p.1). The first step of Integrated Processing is for the teacher to model a strategy for "working out unknown words" (Pemberton, 2003, p.1).

The teacher demonstrates how to sound out segments of a word and underlines each segment as it is said. The teacher rereads the whole sentence to see if the word parts make a sensible word. The student imitates the lesson being sure to include both the "approximating and the checking processes independently" (Pemberton, 2003, p. 3). The student does this for any word they do not know or do not pronounce correctly. The student does this practice every day. During the initial phase of the lesson the teacher will monitor the student's pronunciation of words as well as correct completion of the process. Once the student has become "adept at using both print and meaning to read difficult words" (Pemberton, 2003, p. 3) the student can work independently. Research has shown that this procedure of applying "their phonics skills in concert with their context skills" (Pemberton, 2003, p .3) when reading will increase comprehension.

Word Boxes is an instructional approach using a "drawn rectangle that has been divided into sections (boxes) according to phonemes in a word" (Joseph, 2000, p. 1). Word Boxes is a three phase process. Initially, a word is spoken slowly and the student places a token in the corresponding sections. After some skill has been demonstrated, these tokens are replaced with letters. The final phase has the student writing the letters in the respective sections. In Word Boxes the first phase facilitates phonemic awareness, the second "phonological recoding," (Joseph, 2000, p .4), and the third "orthographic knowledge about words" (Joseph, p. 4).

Word Sort is another three phase instructional approach. Index cards are used to "facilitate the links between phonemic awareness, word recognition and orthographic processing" (Joseph, 2000, p.4). Three index cards are placed horizontally on the desk in front of the student. The words on the index cards designate a category. When the teacher

says a word the student puts a token below a category. The teacher then gives the student the word card to verify the correct choice. In the first lesson students sort index cards phonemically. In the second lesson students visually sort the words into spelling patterns. Lastly, the students spell and write the words out (Joseph, 2000, p .4).

Games and activities to teach phonics and phonemic awareness. "Much debate centers on motivating students in reading achievement. Should students feel motivated from within (intrinsic motivation), or is it better to have extrinsic motivation whereby external stimuli are used to help learners achieve optimally in reading (Ediger, 2001, p. 1)?" According to Ediger (2001), challenging, rich learning activities develop and maintain student interest in learning syllabication skills (Chall, 1983). Practice and review activities are very important for students in phonics retention for each plan of reading instruction used (Ediger & Rao, 2000, p. 6).

> Yopp (1992) offers the following general recommendations for phonemic awareness activities: (a) Keep a sense of playfulness and fun, avoid drill and rote memorization. (b) Use group settings that encourage interaction among children. (c) Encourage children's curiosity about language and experimentation with it. (d) Allow for and be prepared for individual differences. (e) Make sure the tone of the activity is not evaluative but rather fun and informal (Sensenbaugh, 1996, p. 1).

Researchers (Ball & Blachman, 1991; Bradley & 1985; Griffith & Olson, 1992; Lewkowicz, 1980) have used visual and tactile cues based on Elkonin boxes (Elkonin, 1973) to help with phoneme segmentation. Lewkowicz (1980) suggested that sound deletion activities could be done after the children learn and understand some skills in

segmentation and after letter names have been taught. Cole & Mengler (1994) stated, “It is not until the mental age of approximately seven years that children are able to perform phoneme deletion tasks adequately.”

In discussing phonics games and activities, Mountain, author of *How Parents Are Teaching Their Preschoolers to Read*, suggests some methods of teaching beginning reading using word cards, stories written by a parent, and phonics games.

> Activities using word cards include writing the name of a person or object on the card and helping the child associate that card directly with the person or object. Stories written by parents usually feature the children and relatives or friends of the children. Only a minimal vocabulary of nouns and action verbs was necessary in understanding these stories. Phonics games attempt to associate letters with their sounds and can be played with word cards and stories. You can start to play sound games with your child at the same time that you start teaching him to recognize the word Mommy. You might say, “I’m thinking of a word that starts with the sound mmmm. Guess what it is”. Or you might tell your child, “ I see two things in the yard that begin or end with the sound mmmm. What are they?” and what sound do you hear at the beginning of the words saw, see, and Sue?” These games will help your child become aware of sounds. For reading children need to connect a sound with a letter (Mountain, 1974, p. 11).

When using phonics games, or any other teaching materials, one should go only far as the child wants to go. If he enjoys phonics games, play them often. If sounds and letters seem too difficult for him stop and wait a few months then try again. Using these

three simple materials-word cards, homemade books and phonics games-many parents have been able to help their children learn to read (Mountain, 1974).

California Department of Education research has proven that phonemic awareness can be fostered through language activities that encourage active exploration and manipulation of sounds and doing so significantly improves both reading and writing growth for all children (The Reading and Research Base, 2000, p. 17).

The Pros of Teaching Phonics

Sensenbaugh (1996, p. 1) stated, "One reason why educators are so interested in phonemic awareness is that research indicates that it is the best predictor of the ease of early reading acquisition (Stanovich, 1993-94), better even than IQ, vocabulary, and listening comprehension." Phonological awareness is an essential element for reading progress regardless of the educator's instructional techniques (Griffith & Olson, cited in Sensenbaugh, 1996). It is vital that children read a large amount of text at their independent reading levels with at least 95 percent accuracy. The text provides specific practice in the skills being taught (Lyon, 1997).

According to Edelen-Smith (1996-2003), research indicates a strong relationship between early phoneme awareness and later reading success. Research also links some reading failure to insufficiently developed phoneme awareness skills.

> Phonemic awareness is the ability to divide a word into its component sounds. A number of studies have been done in which children are given direct teaching or "training" in phonemic awareness, and the claim has been made that such training is "clearly effective," that it helps children "learn to read and spell" and benefits reading comprehension as well as word reading (Krashen, 2003 p. 1).

Lyon (1997) stated that the ability to read words fluently and automatically, the development of phoneme awareness, and phonics skills are necessary for the construction of meaning from text. Most good readers are usually phonemically aware and understand the alphabetic principle of reading. Good readers can apply these skills to the development and application of phonics skills when spelling and reading words. They accomplish these applications in a fluent and accurate manner (Lyon, 1997). "Research indicates that phonological awareness can be taught and that students who increased their awareness of phonemes facilitated their subsequent reading acquisition" (Lundberg et al, cited in Sensenbaugh, 1996, p. 2).

> In the summer of 1995, the American Federation of Teachers devoted an entire issue of its magazine American Educator to the teaching of reading and the virtues of phonics. In one article, Maggie Bruck, and associate professor of psychology and pediatrics at McGill University, in Montreal, said she has "reviewed the entire database of educational research and [has] not found a single example published in a major peer-reviewed journal that showed that whole language worked" (Sweet Jr., 1997, p. 4).

Beginning reading instruction has been influenced by two areas of research, one advocating a strong focus on meaning and the other advocating for direct instruction in phoneme awareness (Edelen-Smith, 1996-2003). There is no one method of teaching reading that will work for all children. Research, historical experience, and logic suggest that instruction in phonics works better than whole-language. Phonics fosters literacy and helps kids to understand and enjoy their reading. (Ponnuru, 1999).

> When students are brought up on the [whole language] system and see an unfamiliar word, they are told to guess instead of decode. Frustration sets in when children are given a problem to solve without the means to solve it. Chronic frustration leads to negative feelings and anger and loss of self confidence. That's not the way to empowerment (Sweet Jr., 1997, p. 5).

The Cons of Teaching Phonics

> Those who object to phonics maintain that there are exceptional rules to be learned because sound-letter relationship in English language is not consistent. Based upon this factor, the inconsistent phonics rules cannot help learners decode most highly frequent words occurring in a text, due to many words that are exceptional to the rules (Swaby, 1984, p. 167). Naturally, the learners who tend to sound out words may fail to comprehend or misinterpret the meaning of texts (Phonics Instruction vs. Whole, n.d., p. 1).

There is insufficient evidence to support the National Reading Panel's claims that phonemic awareness instruction greatly improves children's reading (Krashen, 2003). Frank Smith, a whole language theorist, argued that skilled readers skip around instead of reading each word, using context to confirm hypotheses about the meaning of text (Palmaffy, 1997). Other studies by Keith Stanovich of the University of Toronto and Charles Perfetti of the University of Pittsburgh have shown that good readers rarely rely on context; instead, they speed through text with little or no effort (Palmaffy, 1997).

> Horace Mann, Massachusetts's secretary of education in the mid-1800s, wrote: 'it is upon this emptiness, blankness, silence and death, that we compel children to fasten their eyes; the odor and fungeousness of spelling book paper; a soporific

> effluvium seems to emanate from the page, steeping all their faculties in lethargy (Sweet Jr., 1997, p. 2).

Instead of phonics based instruction, Mann preferred a method of teaching called "look and say" (Sweet Jr., 1997).

> Ken Goodman, one of America's more famous whole language advocates, writes in the Whole Language Catalogue, "Whole language classrooms liberate pupils to try new things, to invent spellings, to experiment with a new genre, to guess at meanings in their reading, or to read and write imperfectly. In whole language classrooms risk-taking is not simply tolerated, it is celebrated" (Sweet Jr., 1997, p.3).

The state department of education rewrote its entire curriculum in 1987, ditching phonics for a literature-based, whole-language approach (Palmaffy, 1997). A longitudinal study with thirty-eight kindergartners "found that the whole language group made more progress in both reading and writing, and with more developmental coherence, as evidenced by the absence of regression and confusion" (Kamii & Manning, 2000, p.1).

Delimitations of the Study

While implementing the Help Me 2 Learn Phonics Game there were several delimitations that may have influenced our research findings. For example, students were often pulled out of class for special programs such as resource, fund raisers, and fire drills. Excessive absenteeism limited student's ability to participate in the creative research project. Some of the classrooms experienced students transferring in and out of the class during the study; thus, student's stability on the computer was hindered. All of

these factors also limited the student's instruction time on the computer. Consequently, mastery of phonemic awareness may have been negatively impacted.

Research Methods

Subjects

The research subjects for this study were elementary students. One of the school systems was suburban, and the other three were urban school systems. Class B, Class C, and Class D were all predominantly African-American. Class A was predominantly Caucasian students. The socioeconomic backgrounds for Classes B, C, and D were low-income, and Class A was upper-middle-income. Student grade levels from Classes A, C, and D were coming from Montessori school systems. Student grade level from Class B was from a traditional school system. Student grade levels consisted of Pre-K/Kindergarten grade split Class A, First/Second grade split Class B, Third grade split Class D, and first grade Class C.

Procedures

Description of the Game. The phonics program, Help Me 2 Learn Phonics game, was implemented the second six weeks of school. The Help Me 2 Learn Phonics game was in CD-ROM format. The CD-ROM was created for the learner to go at his/her own pace. The CD consists of phonics games, activities on sounds, a vocabulary list, and music. There were two CDs for the first level of the Help Me 2 Learn Phonics game series: 1a and 1b. In phonics 1a the students "listen to the sounds of short and long vowels. They hear words and see pictures of things that short and long vowels stand for (Helpme2Learn.com, 2002, n.d.)." For example,

> Sing-along with the ‘‘Short *a* song,’’ then listen to explanations of short vowels in general, and the short ‘*a*’ in particular. Next, learn the vocabulary that is used in the ‘‘Cat on a Mat’’ short *a* game, and then play this game which involves distinguishing between words with short and long *a* sounds. Similar songs and vocabulary lists and activities are then presented in lessons 3-14 for the remaining four short vowels and the five long vowels, plus using *y* as a vowel. (*The Reading Research Base*, 2002, n.p.)

In phonics 1b the students, “Listen to an explanation of and see and hear the 21 consonants, plus an introduction to the four “trick” consonants: C, G, X and Y.” (*The Reading Research Base*, 2002, n.p.) The students will also have lessons on “Talking one sound consonants, talking multi-sound letters, consonants B, C, D and F, letter sounds, phonics rules and making sounds, and phonics blending and spelling” (*The Reading Research Base,* 2002, n.p.) There were 10-20 different songs and games that help the children better understand phonics blending and spelling.

General Administration Procedures. In the fall semester of 2003, the study began by obtaining permission from the public and private school systems. The teachers informed school principals and parents (See Appendix A) regarding the action research project. The following instruments were used for obtaining current data: attitudinal surveys (See Appendix B), pre-phonic assessment for kindergarten through second grade and third grade (See Appendix C), teacher journals (See Appendix D), student interviews (See Appendix E), and post-phonic assessments (See Appendix F).

The attitudinal surveys (See Appendix B) were given orally to each student by the teacher. All students responded to each statement by coloring under their answer.

The following statements included:

1. I like using the computer.
2. I like to read by myself.
3. I like it when someone reads to me.
4. I like reading.
5. When I read, I try to sound out words I do not know.
6. I like playing letter games.
7. I like to write stories.
8. I like to spell words.

The attitudinal surveys were given again at the end of the fall semester. On the first day of class the teacher sent home a letter asking permission for the child to participate in the action research project. The teacher orally administered a pre-phonics assessment. The pre-phonics assessment for kindergarten through second grade (See Appendix C) had several components which were upper and lower letter recognition, short and long vowel sounds recognition, beginning and ending blends and sight words. The pre-phonics assessment for third grade had components which were short and long vowel sounds recognition, beginning and ending blends, and consonant beginning sounds. The student circled the letter or word that corresponded to what the teacher asked.

The students were given a post-phonics assessment that was identical to the pre-phonics assessment. Interviews were recorded on each student. The questions were:

1. Did you enjoy working on the computer? Why did you enjoy or not enjoy working on the computer?

2. What was your favorite activity on the phonics game?

3. Do you feel you have mastered your vowel and consonant sounds?

4. Would you want to play these same games at home?

5. Would you like to continue developing your reading skills with the Help Me 2 Learn Phonics Game?

Procedures for implementing the model. For the first semester each student played the *Help Me 2 Learn Phonics* game during scheduled computer time. The students worked at a computer either in a computer lab or classroom. During the five weeks of phonics instruction, teachers recorded their observations. Each student completed a pre and post attitudinal survey. Grades were recorded on a weekly progress report from software and school curriculums.

Instruments Used

Various instruments were used during the course of this study to answer the aforementioned research questions. A parent letter (see Appendix A) was sent to the parents of each student which explained the phonics-based research principles and its inclusion into the research project. During the first week of school, an attitudinal survey (see Appendix B) was given to determine the students' attitudes about computers and phonics. Two examples of the types of statements that were asked in the survey were "I like using the computer." and "I like to read by myself." This survey was administered at the end of the semester to compare a change in attitudes.

During the first six weeks of school each teacher collected data from their class. Teachers used the following instruments for obtaining current data: attitudinal surveys (See Appendix B), pre-phonics assessment (See Appendix C), teacher journals (See

Appendix D), student interviews (See Appendix E), and post-phonics assessments (See Appendix F). Low ability students were given the attitude survey (Likert Scale) and post-phonics assessment at the end of the semester.

Treatment of the Data

Data from various instruments was gathered to analyze the integrating of the principles of phonics-based research into the elementary classroom. Teacher used journals to analyze trends and patterns to determine strengths and weaknesses. Dependent *t*-tests were used to determine differences in academic achievement. Academic achievement was represented by pre-phonics test and post-phonics test. Dependent t-tests were used to determine differences in attitude for each of the four classes after implementation of phonics-based research.

Findings

Question 1: What are the strengths and weaknesses of the Help Me 2 Learn Phonics Game in the elementary classroom?

Teacher observations, student interviews, and results of statistical testing were analyzed to determine the strengths and weaknesses of the Help Me 2 Learn Phonics Game in the elementary classrooms. Numerous strengths were demonstrated that were very beneficial in developing the students' phonemic awareness. Only a limited number of weaknesses were demonstrated. A detailed description of the strengths and weaknesses is presented in the following sections.

Strengths. Overall, the Help Me to Learn Phonics Game helped students in all classrooms to significantly increase phonics skills, especially recognition of consonants and long and short vowel sounds. The increase in phonic skills is evidenced by the

statistically significant difference between pretest and posttest scores on the phonics assessments administered to all students. Analysis of teacher observations and student interviews (see Table 1) provided numerous examples of specific benefits to students.

The game helped students identify vowel sounds as well as sight words. For example, during reading instruction, students were able to identify words with short vowel sounds on the phonics chart and in leveled readers. During independent journal writing, the students demonstrated knowledge of increased vocabulary by including sight words learned from the Help Me 2 Learn Phonics Game. Learning vowels and letters on the computer enabled students to focus for longer periods of time. The phonics skills were taught in a variety of formats. The games were fun for the students. They provided a different method of learning other than textbook. The game provided sing-along short vowel songs, matching games, and interactive question and answer games. Students also developed computers skills by using the mouse to navigate through the software. They became familiar with the icons for back, reset, exit, help, and next. The game provided activities for children below reading grade level. It also enabled students to transfer word recognition strategies to new situations. For example, during cooperative reading groups, if a student approached a word he or she did not know the student would stop and sound out words by applying what was learned from the phonics game.

A final strength of the game was its positive impact on students' self-esteem. Students were able to work at their own pace, check their own progress, and celebrate their accomplishments. Students were able to work at their own pace because there were no time limits. The game did not have a timer that would shut down the game after a specified time. Students could choose to play one game or several games during their

scheduled computer time. Students could check their progress on each activity. For example, students often checked the star icon to see if they earned a gold (total mastery of content), silver (partial mastery), or purple star (non-mastery). After mastery of each activity, the students showed excitement by doing a silent cheer. In the kindergarten classroom a student stated, "I want to keep trying it until I get it right."

Weaknesses. Review of teacher observation notes revealed that the games allowed students to go to the next section even if the student had not completed or mastered pervious sections. Students could move on to long vowel sounds before mastering short vowel sounds. Students could skip phonics instructions given in the songs and move directly on to the phonics games. Therefore, the students did not receive the rules needed to master each game. The games also required a100% accuracy for students to receive a gold star which proved to be difficult at times. For example, a student stated "I can't ever get it right." The songs tended to be too long and did not allow much interaction. For example, the students could only watch and listen to the phonics instruction given during the songs. They became bored and inattentive. Unlike the games, the songs did not allow the students to use the mouse which helped to engage the students. The game only allowed students to click on letters or words with the mouse. For example, on the creating a story section, students were only allowed to click on the word in each sentence. They were not allowed to write complete sentences or edit the story using the keyboard. Using the keyboard would have allowed the students to use more critical thinking skills and further engage the students.

Table 1- Summary of Teacher Observations and Student Interviews

Themes	Teacher Observation	Student Interview
Strengths of the Help Me 2 Learn Phonics Game in the elementary classroom.	• Students were engaged by the music. • Students were anxious to use the computer. • Students enjoyed various games. • The game was user friendly. • The students were taught the phonics rules.	• In all classrooms 100% of the students stated they thought the games were fun. • In all classrooms 100% of the students wanted to continue to use the Help Me 2 Learn Phonics Game.
On Task Behaviors	• Completing the games • Mastering individual games • Attempting the game a second time to receive a gold star. • Students cheered after completing a game with comments such as "Yea, I knew it, I did it"	
Weakness of the Help Me 2 Learn Phonics Game in the elementary classroom.	• Songs were not as interactive as the games so the students would skip the phonics instructions given in the songs to go to the games. • There were too many words given as examples before each game; therefore, students would skip the words.	
Favorite Games	• Ape with a Cape • Mule with a Rule • Toad on The Road • Bug on a Rug	• 100% of class B picked Toad on the Road • 75% of class A picked Mule with a Rule as a favorite • 50% of class C picked Ape with a Cape as a favorite • 50% of class C picked Toad on the Road • 50% of class D picked Toad on the Road • 50% of Class D picked Bug on a Rug • 25% of Class A pick Ape with a Cape
Off Task Behaviors	• Watching other students while playing the game • Not completing games in sequence • Disturbing other students while they were playing the game.	

Question 2: Will implementing the Help Me 2 Learn Phonics game improve phonics test scores?

As previously stated and as shown in Table 2, results of dependent t-test indicated that students significantly improved phonic test scores after using the Help Me 2 Learn Phonics game. The average scores for Kindergarten, First, and Second grade students combined were found to significantly increase (*p=.001*) from a mean score of 62.21 to 81.07. Similar results were demonstrated for third grade students. Mean scores increased significantly (*p=.001*) from 34.00 to 59.00.

Table 2

Summary of Results of Statistical Analysis

Type Test	Grade Levels	Pretest Mean	Post-test Mean	*p*
Phonics Skills	Kindergarten – Grade 2	62.21	81.07	.001*
	Grade 3	34.00	59.00	.001*
Attitudinal Survey	Kindergarten – Grade 3	19.72	19.72	1.00

* $p<.05$ level of significance

Question 3: Is there a change in attitude when the Help Me 2 Learn Phonics game is incorporated into the elementary classroom?

Student responses on the pre and post attitude surveys were also compared using the dependent t-tests (See Table 2). According to the paired t test there were no significant changes (p=1.00) in attitudes of the students after implementing the Help Me 2 Learn Phonics Game. In fact the pretest test and post test means were the same, 19.72. Further insight into student attitude was afforded through analysis of the student interviews conducted after implementing the Help Me 2 Learn Phonics Game. In all classrooms students agreed that they enjoyed working on the computer, had a favorite

activity on the phonics game, and would like to continue developing their reading skills using the Help Me 2 Learn Phonics Game.

Conclusion

The computer-based Help Me 2 Learn Phonics Game proved very beneficial in increasing academic achievement. In addition to the statistically significant improvements in phonic skills, the program also benefited students by allowing them to monitor their own progress independently, work at their own pace, and increase their vocabulary across the curriculum.

There were more strengths than weaknesses demonstrated in using the Help Me 2 Learn Phonics Game in the elementary classroom. All the researchers believed that the students became intrinsically motivated and displayed greater self-confidence. Students began using and applying skills learned from the phonics game during other literacy activities and independent reading. They helped other students to sound out words and were able to identify sight words commonly posted around the school, i.e., word walls and cafeteria posters.

Researchers concluded that perhaps the greatest weakness of the game was that it allowed students' to go on to another screen without mastering the previous screen. The program should have included a prompt that prevented the students from moving to the next screen without partial mastery or mastery. It is very important for students to understand and identify short vowel patterns before moving on to the long vowel patterns.

Discussion

According to the National Reading Panel in 2000, researchers suggested phonics skills must be incorporated with the preparation of phonemic awareness. The researchers chose the Help Me 2 Learn Phonics Game because it incorporated phonemic awareness with a diverse approach. For example, the format of the game incorporated music, graphics, guided oral reading, and allowed students to track their progress. The researchers established that the Help Me 2 Learn Phonics Game motivated learners to practice their phonemic skills; thereby, increasing their phonics test scores.

The paired t test found that there was not a significant difference in the pre and post attitude surveys. Researchers assumed that student's attitudes towards using a computer, reading alone, being read to and their phonemic skills would be negative during the pre-attitude survey. In the classroom, students displayed little interest in reading independently or reading in small groups. Also, the students scored below grade level on the pre-phonics test. Researchers later discovered on the post-attitude that students attitudes did not change. Students scored as high on the pre-test as they did on the post-test. The researchers felt that the students' answers were skewed because of their desire to please their teachers by answering always or sometimes.

In the literature review researchers stated that engagement in meaningful and skilled activities must be put into practice in order for children's needs to be met. The Help Me 2 Learn Phonics Game has meaningful and skilled activities that met the children's needs. For example, when students were engaged in the games, they were more determined to master phonics skills. Students could also interpret pictures representing the short and long vowel sounds, and maneuver their mouse over the words

to hear the sounds each word represented. After using the Help Me 2 Learn Phonics Game, students were able to recognize letters, identify words, and manipulate sounds beyond the classroom setting.

Throughout the study all researchers discovered a limited access of technology to be detrimental to their findings. For example, in the Kindergarten class, the school administrators felt that computers were not developmentally appropriate for Kindergarten students. Administrators did not allow students to use the computer lab or computers in the classrooms. Rather the research had to be conducted as an after school activity. In the First Grade classroom one computer was stolen. As a result, students began fussing over computers. Also, time on the computer was very limited. In the Second Grade classroom there was only one computer. Students anxiously awaited their turn to use the computer. The Third Grade classroom's computers were relocated by the administration before the end of the research study. Students had to switch from the classroom to the computer lab to complete the research. Researchers felt that these limitations in technology may have negatively affected progress.

Future research should address the issue of providing elementary classroom teachers with access to phonics based computer games. Researchers believe that colleagues should incorporate phonemic awareness into the curriculum by using computer software like the Help Me 2 Learn Phonics Game. The Help Me 2 Learn Phonics Game provides teachers with lesson plans, assessment tools, and a progress tracking tool for additional phonics instruction. Basic computer skills would be the only requirement for teachers to administer such programs.

Reference

Adams, M.J. (1990). *Beginning Reading Instruction in the United States.* Bloomington, IN: ERIC Clearinghouse on Reading and Communication Skills. (ERIC Document Reproduction Service No. ED321250)

Bower, B. (2000). *Good Readers May Get Perceptual Lift*. Science News, 157, 180 Retrieved June 7, 2003, from http://web3.infotrac.galegroup.com/itw/infomark/727/579/62293630w3/purl=rlc_SP00_0_A61793390&.

Edelen-Smith, P. (n.d.). *How Now Brown Cow: Phoneme Awareness Activities for Collaborative Classrooms*. Retrieved June 6, 2003, from http://www.ldonline.org/ld_indepth/teaching_techniques/cld_hownow.html

Ediger, Marlow. (2001). *Phonics in the Reading Curriculum*. Retrieved June 2003, from Eric Documents Reproduction Services

Fitzsimmons, M. K. (1998) *Beginning Reading*. Retrieved June 5, 2003, from http://www.askeric.org/plweb-cgi/obtain.pl

Fleming, B. Brain. *Keys Language Development*. Ames Tribune. Retrieved 2 July 2003, from http://www.nncc.org/Release/brain.language.html

Help Me 2 Learn Company. (2002). *The Reading Research Base of the Help Me 2 Learn Super STAR Series of Phonics Programs*. Retrieved June 2003, from http://www.helpme2learn.com/research.html

Joseph, L.M. (2000). *Developing First Graders' Phonemic Awareness, Word*

*Identification and spelling: A Comparison of Two Contemporary Phonic Instructional Approaches. Reading Research and Instruction 39, 2,*160-169. Retrieved June 26, 2003, from http://vnweb.hwwilsonweb.com/hww/results/results_single.jhtml?nn=56

Lin, C.H. (2001). *Early Literacy Instruction: Research Applications in the Classrooms* (Digest No.166, EDO-CS-01-07). Bloomington, IN: ERIC Clearinghouse on Reading and Communication Skills. (ERIC Document Reproduction Service No.)

Lyner, Hancock & Wingert, P. (1996). *Phonics: Latest Research Shows That Phonics is the Best Way to Learn to Read.* Retrieved June 7, 2003, from http://www.cdipage.com/phonics.htm

Lyon (1997). *Report on Learning Disabilities Research.* Retrieved June 7, 2003, from http://www.jwor.com/researc1.htm

Manning, M. & Kamii, C. (2000). *Whole Language vs. Isolated Phonics Instruction: A Longitudinal Study in Kindergarten With Reading and Writing Tasks*. Retrieved June 26, 2003, from http://vnweb.hwwilsonweb.com/hww/results_single.jhtml?nn=58

Mountain, L. (1974). *How Parents Are Teaching Their Preschoolers to Read*. Retrieved June 6, 2003, Eric Document Reproduction Service.

Palmaffy, T. (1997). *See Dick Flunk*. *Policy Review, 86*, 32-40. Retrieved June 3, 2003, from http://vnweb.hwwilsonweb.com/hww/results_single.jhtml?nn=7

Pemberton, Jane B. (2003). *Integrated Processing: A Strategy for Working Out Unknown Words*. *Intervention in School and Clinic 38, 4,* 247-250. Retrieved June 3, 2003, from http://vnweb.hwwilsonweb.com/ww/results/results_single.jhtml?nn=72

Research Regarding Phonics. Retrieved June 7, 2003, from http://www.projectpro.com/ICR/Research/Phonics/Summary.htm

Shaywitz, S. (1996). *10 years of Brain Imaging Research Shows The Brain Reads Sound by Sound*. *Scientific America, 45,* 3-27. Retrieved June 7, 2003, from http://www.child Developmentinfo.com/learning/brain.shtml

Shields, M.K. & Behrman, R.E (2000). *Children and Computer Technology: Analysis and Recommendation*. *Children and Computer Technology, 10.* Retrieved June 16, 2003fromhttp://www.futureofchildren.org/information2826/information_show.htm?doc_id=69789

Simic, M.R. (1993) *Guidelines for Computer-Assisted Reading Instruction*. Bloomington, IN: ERIC Clearinghouse on Reading and Communication Skills. (ERIC Document Reproduction Service No. ED352630)

Star, L. (2002). *Technology Integration Made Easy*. Education World, 1-6. Retrieved June 24, 2003, from http://www.education-world.com/a_tech/tech146.shtml

Sullivan, E.A. & Keating, C. L. (1998). *The Need to Train Teachers to Use and Integrate Technology in the Classroom*. Society for Information Technology & Teacher Education 1998, CD-ROM. Retrieved June 27, 2001 From http://cssjournal.com/e_sull~

Sweet, R.W. (1997). *Don't Read, Don't Tell: Clinton's phony war on illiteracy*. *Policy Review, 83,* 38-42. Retrieved June 3, 2003, from http://vnweb.hwwilsonweb.com/hww/Results_single.jhtml?nn=80

Toch, T (1997) *The Reading Wars Continue*. U. S. News & World Report, 123, 77. Retrieved June 3, 2003, from http://vnweb.hwwilsonweb.com/hww/Results/results_single.jthml?nn=52

Wren, Sebastian. (2001). *Phonics Rules*. *Topics in Early Reading Coherence*. Retrieved June 5, 2003, from http://www.sedl.org/reading/topic.html

Yopp, H. (n.d.). *The Structure of Phonemic Awareness*. Retrieved June 6, 2003, from http://www.psy.utexas.edu/psy/klarson/recife.htm

APPENDIX

Appendix A

Parent Survey

Dear Parents,

I am in Graduate School at Union University. As a part of my research component, I will integrate the Help Me 2 Learn Phonics Game into my classroom curriculum.

I am requesting your permission to allow your child to participate in this computer based phonics research program. The Help Me 2 Learn Phonics Game is a literacy enrichment activity that will start in August and end in December. It will be used in addition to the regular classroom instruction.

Please print your child's name and sign your name on the lines provided below. I appreciate your help in this regard.

Sincerely,

Child's name

Parent's signature

Appendix B

Attitude Survey

Name_____

Date_____

Directions: Color the space under your answer.

	Statements	Always	Sometimes	Never
1.	I like using the computer.			
2.	I like to read by myself.			
3.	I like it when someone reads to me.			
4.	I like reading.			
5.	When I read, I try to sound out words I do not know.			
6.	I like playing letter games.			
7.	I like to write stores.			
8.	I like to spell words.			

Appendix C

PHONICS PRE-TEST

Grades K-2

Name: _____

Date: _____

Letter Recognition

1. Circle the Upper case Aa

C V A

2. Circle the lower case Bb

r o b

3. Circle the upper case Gg

G D S

4. Circle the lower case Ee

T Q e

5. Circle the upper case Zz

G U Z

6. Circle the lower case Uu

u W Y

7. Circle the upper case Dd

J D L

8. Circle the lower case Pp

I t p

9. Circle the upper case Ii

I Q K

10. Circle the lower case Kk

y k x

Sound Recognition (Consonants, Long & short vowel sounds)

Short Vowel Sounds

1. Circle the word that has the short a sound.

   at five log

2. Circle the word that has the short I sound.

   fat bit car

3. Circle the word that has the short u sound.

   bug sat it

4. Circle the word that has the short e sound.

   egg in on

5. Circle the word that has the short o sound.

   bag fox cut

Long Vowel Sounds

1. Circle the word that has the long a sound.

   ate cute open

2. Circle the word that has the long e sound.

   old ice eat

3. Circle the word that has the long I sound.

ice in it

4. Circle the word that has the long o sound.

   on old ox

5. Circle the word that has the long u sound.

   up cut use

Consonant Sounds

1. Circle the word that has the c sound.

   car tree you

2. Circle the word that has the b sound.

   dog ball sat

3. Circle the word that has the t sound.

   fox Ted hat

4. Circle the word that has the f sound.

   sun fun bed

5. Circle the word that has the h sound.

   run egg hot

6. Circle the word that has the w sound.

   at we say

Blends and Combination Sounds

Circle the beginning sound you hear in each word I say.

1. Stop

2. tree

3. black

Circle the ending sound you hear in each word I say.

1. sink

2. back

3. clap

Sight Words

Circle the word I call out

1.	the	at	same
2.	can	an	am
3.	to	you	car
4.	what	sat	dog
5.	eat	was	well
6.	It	his	in
7.	yes	an	no
8.	me	when	one
9.	of	run	two
10.	on	did	rat

PHONICS PRE-TEST

Grades 3

Appendix D

Teacher Observation Journal

1. Teacher observation of student engagement in the game:

_____

_____

_____

_____

_____

_____

2. Description of off task behavior during the phonics game.

_____

_____

_____

_____

_____

_____

Appendix E

Student Interview

1. Did you enjoy working on the computer? Yes or No

Why did you enjoy or not enjoy working on the computer? _____

_____

_____

_____

2. What was your favorite activity on the phonics game? _____

_____

_____

_____

3. Do you feel you have mastered your vowel and consonant sounds? Yes or No

4. Would you want to play these same games at home? Yes or No

5. Would you like to continue developing your reading skills with the Help Me 2 Learn Phonics Game? Yes or No

Appendix F

PHONICS POST-TEST

Grades K-2

Name: _____

Date: _____

Letter Recognition

1. Circle the Upper case Aa

C V A

2. Circle the lower case Bb

r o b

3. Circle the upper case Gg

G D S

4. Circle the lower case Ee

T Q e

5. Circle the upper case Zz

G U Z

6. Circle the lower case Uu

u W Y

7. Circle the upper case Dd

J D L

8. Circle the lower case Pp

I t p

9. Circle the upper case Ii

I Q K

10. Circle the lower case Kk

y k x

Sound Recognition (Consonants, Long & short vowel sounds)

Short Vowel Sounds

5. Circle the word that has the short a sound.

at five log

6. Circle the word that has the short I sound.

fat bit car

7. Circle the word that has the short u sound.

bug sat it

8. Circle the word that has the short e sound.

egg in on

5. Circle the word that has the short o sound.

bag fox cut

Long Vowel Sounds

6. Circle the word that has the long a sound.

ate cute open

7. Circle the word that has the long e sound.

old ice eat

8. Circle the word that has the long I sound.

ice in it

9. Circle the word that has the long o sound.

   on old ox

10. Circle the word that has the long u sound.

    up cut use

Consonant Sounds

7. Circle the word that has the c sound.

   car tree you

8. Circle the word that has the b sound.

   dog ball sat

9. Circle the word that has the t sound.

   fox Ted hat

10. Circle the word that has the f sound.

    sun fun bed

11. Circle the word that has the h sound.

    run egg hot

12. Circle the word that has the w sound.

    at we say

Blends and Combination Sounds

Circle the beginning sound you hear in each word I say.

4. Stop
5. tree
6. black

Circle the ending sound you hear in each word I say.

4. sink
5. back
6. clap

Sight Words

Circle the word I call out

1.	the	at	same
2.	can	an	am
3.	to	you	car
4.	what	sat	dog
5.	eat	was	well
6.	It	his	in
7.	yes	an	no
8.	me	when	one
9.	of	run	two
10.	on	did	rat