RUNNING HEAD: Years of Animated Literacy Letters

PRE AND POST TEST TO SEE THE DIFFERENCE BETWEEN YEARS OF
ANIMATED LITERACY AND KNOWLEDGE OF LETTERS

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Abstract

This research was conducted to find out if the Animated Literacy program is effective for students when learning letters and their sounds. The study looked at preschool students who are 3, 4, and 5 years old. The questions addressed were: Is the program effective for these students? Is there a relationship in the number of years a student has participated in Animated Literacy and how many letters and sounds they can identify? Does the kinesthetic approach in Animated Literacy help the students learn and remember the letters and their sounds?

The research was conducted by giving the students a pre-test and post-test for knowledge of letters and their sounds. Comparing and finding the difference between the number of years, of animated literacy letters and letter sounds knowledge.

The results of this study show that there is a significant difference between pre and post tests on alphabetic knowledge when the Animated Literacy program was used for instruction. The conclusion of this research shows that the Animated Literacy program was successful at the Liberty Early Childhood Center.

Introduction

Background, Issues and Concerns:

This study was conducted in the Liberty Public School District in Liberty Missouri. The school is located in a suburban community consisting of two high schools, two junior high schools, two middle schools, ten elementary schools and one Title I, Special Education preschool. According to more recent demographic data found on the Missouri Department of Elementary Secondary Education website, the district serves more than 10,700 students in grades preschool through 12th grade. In the year 2010 the preschool's enrollment was 239 students, ages 3-5. The students in the program have to qualify by going through a screening the DIAL-3. Students who qualify are considered at risk educationally, we also have students who come from Missouri First Steps program that come in with IEP's.

The Liberty School District use Animated Literacy for our literacy curriculum from the preschool level to 2nd grade. While working at the Early Childhood Center in Liberty a growing concern by staff was is this curriculum beneficial to the students.

Practice under Investigation:

The practice under investigation is the use of Animated Literacy program to teach students their letters and their letter sounds to preschool age students.

School Policy to be Informed by Study:

The school district's literacy program for grades preschool-3rd grade is the program being studied. The school consists of 9 classrooms where all teachers are required to have animated literacy somewhere is their daily schedule. In these classrooms normally one letter is studied for one week. The letter is introduced with a song, story,

and an action. The teachers may also choose to do an animated activity where the classroom paraprofessional steps in to help students during the activity.

Conceptual Underpinning:

Kinesthetic learning is a way in which students learn by doing. It is the potential of using ones whole body to problem solve (Smith 2008). There are also other types of learning such as visual and auditory. When students are able to move around and be hands-on with their learning they will retain more. In Howard Gardner's *Frames of Minds: the Theory or Multiple Intelligences* Kinesthetic learning was originally discussed. Gardner viewed intelligence as the "capacity to solve problems" (Smith, 2008, p.22). Gardener believed that students learn in different ways. Some students learn by spatial judgment and the ability to visualize with the eye, some learn by linguistic learning with words, spoken or written, some learn by bodily-kinesthetic learning by ones bodily motions, and movements, some learn by musical those who learn by sounds, rhythms, tones and music. Other students learn by interactions with others called interpersonal. Intrapersonal is where a student can learn by self-reflections and knowing about yourself. Naturalistic learners can relate to one's natural surroundings dealing with environment. Some students learn by existential which is learning spiritual or religious. (Theory, 2012) Animated has the students use their hands by performing an action while they say the sound of the letter. The inclusion of kinesthetic learning should, in theory, increase student achievement.

Statement of the Problem:

There is question at the Liberty Early Childhood Center about whether the literacy program use and is it used in the center as an effective, method for students to learn letters and letter sounds.

Purpose of the Study:

The purpose of this study is to determine if the Animated Literacy Program is beneficial for the students when learning their letter and letter sounds.

Research Question(s)

1. What are the letters a student knows on a pre-test prior to receiving instruction in letters?

2. How many years has the student been exposed to the Animated Literacy Program and their knowledge of letters.

3. After the students have participated in the program, can the students identify the letters?

4. Is there a difference in the amount of letters a student can identify between prior to the Animated Literacy program and after participation in the Animated Literacy program?

Null Hypothesis:

There is no difference in the amount of letters a student can identify between prior to the Animated Literacy program and after participation in the Animated Literacy program?

Anticipated Benefits of the Study:

The results of this study will inform staff at the early childhood center regarding the effectiveness of Animated Literacy and if they need to make any kind of adaptations to the program.

Definition of Terms:

Kinesthetic Learning: is a learning style in which learning takes place by the student carrying out a physical activity, rather than listening to a lecture or merely watching a demonstration.

Animated Literacy: comprehensive, researched based, multisensory approach to reading, writing, and oral language instruction that moves students from the earliest stages of literacy to fluency and independence in reading and writing at a third grade level. Phonological awareness, phonics, vocabulary development, comprehension, and fluency are all key elements of the program. (Stone, 2006)

Phonological Awareness: The knowledge and conscious understanding of the sound structure of language, ranging from the identification and manipulation of words, syllables, onsets, and rimes, to rhyming and spelling.

Phonics: The study of the relationships between letters and their corresponding sounds; an approach to teaching the fundamentals of reading that emphasizes sound-letter relationships as the gateway to word recognition.

Comprehension: Comprehension is the means by which an individual develops understanding of something, whether it is a fact, an idea, or a complicated concept.

Teacher-directed learning: Students work to achieve curricular objectives in order to become critical thinkers, complete activities designed by the teacher to achieve academic success, respond to positive expectations set by the teacher as they progress through activities, are given extrinsic motivators like grades and rewards in which motivates children to internalize information and objectively demonstrates their understanding of concepts, and work is evaluated by the teacher.

Child-directed learning: is an approach to education focusing on the needs of the students, rather than those of others involved in the educational process, such as teachers and administrators.

Summary:

The Early Childhood Center serves students ages 3-5 in a preschool setting. Some students at the Early Childhood Center have an IEP. The Early Childhood Center is part of the Liberty Public School District. This school uses Animated Literacy as their literacy program to teach letters and letter sounds. The program uses kinesthetic learning and phonological awareness. This study investigated whether Animated Literacy is an effective program for the Early Childhood Center.

Review of Literature

Animated Literacy was developed by Jim Stone (2006) and focuses on phonemic awareness, phonics, vocabulary development, comprehension, and fluency. Animated Literacy is a curriculum that provides a comprehensive approach to reading and writing that teaches the basic skills and concepts that are essential for early childhood literacy instruction. This review will focus on how students learn to read, the brain research for teaching reading, what Animated Literacy is, and how to teach Animated Literacy. The Early Childhood Center does not have data or concrete proof that the Animated Literacy program is an effective program.

Loveless (2001) stated that there are three different variations of teaching reading. The earliest was the alphabet method where the students learned how to ready by memorizing the letters of the alphabet. The next method was the method of teaching phonics, followed by the method that students should learn words and sentences rather that letter and their sounds. The traditional reading instruction uses a part to whole reading approach and is more based on phonics. The contemporary reading instruction uses a whole to part reading approach. "It begins by teaching children to read stories with familiar language via shared reading and then teaches them letter-sound correspondences in the context of the stories that they have learned to read (Loveless, 2001, p.249)."

Jim Stone 2009 in his research when creating Animated Literacy did his own brain research to help develop the animated curriculum. Willis has also done his own research for teaching reading strategies to students. Willis (2009) there is a "reading war" and that we have one brain that has two sides. The author describes how the brain learns

to read. The brain processes to the visual and auditory stimuli, and relate unknown information to the known. Jim Stone was saying about one brain but two sides. The author states that "Reading is the behavioral product of the interaction of multiple structures in the brain through distributed networks" (Stone, 2009, p. 16). Reading is not just one side of the brain or one part of the brain the brain works together to help individuals learn to read. The author reinforces that the brain is a "pattern-seeking devices" meaning that it is consistently taking new information and trying to connect it to previous knowledge. In one aspect this is how the brain works together to help us learn to read. This helps individuals to understand how the students' brains learn to read and how animated-literacy is a positive program for school districts.

Animated Literacy program consist of 3 basic components of teaching animated literacy. The animated-alphabet, pattern reading, writing, and draw to read and write. Animated-Literacy is a teacher directed and student directed program. The basic lessons engage student's minds, emotions, and muscles through teacher directed activities that include movement, manipulative, gestures, finger plays, songs, and books. Stone also states that a "scientific study of reading has revealed that phonological awareness, listening comprehension, a large listening vocabulary, and the rapid recognition of letters and letter patterns necessary elements for fluency" (Stone, 2010, p.3). In the animated literacy program the students hear books, rhymes, stories, and songs that invite the student to participate. The students participate by imitating gestures, sounds, words, and phrase. Animated Literacy provides direct systematic skills in a sequence that is based on student's development of language.

Jim Stone 2010 developed a certain order in which to teach animated literacy. The booklet gives a quick overview of all the letters and the lessons, gestures and songs to go with the letter. Each lesson is outlined with introducing the letter and character. The first step is to teach the song *Are You Sleeping* and the second step is to access related prior knowledge. The third step is to read aloud related books to the concepts in the characters story. The fourth step is to read or tell the character's story. After reading the story the teacher should introduce the characters sound and gesture. The teacher should then teach the song that goes with the character and incorporate the gestures. The last step is to draw and write about related experience. It also has research in reading, language development, learning, memory and emotions.

Teaching students how to read is an important skill for students to have. Learning to read is a crucial skill for all learners. Therefore, utilizing an effective reading program, especially for beginning readers, is important. In Jim Stone's work he states, "Compelling evidence has shown that young children's alphabet knowledge and phonological awareness are significant predictors of their later proficiency in reading and writing. (Stone, 2006, p.1)" Many early childhood centers do teach letters and their sounds. Jim Stone has created a program (Animated Literacy) that has addressed early instruction that moves students from the earliest stages of literacy to fluency and independence in reading and writing. His research on the brain and how individuals learn to read have helped him to develop the program. The key elements of his program focus on phonological awareness, phonics, vocabulary development, comprehension, and fluency. Loveless 2001 talks about traditional reading instruction which is part to whole and is based on phonics. Willis talks about how the brain learns to read. Willis stated,

"Our brain is pattern seeking which mean that it is consistently taking in new information and trying to make new connections" (Willis,2009,p.334). In Stone's 2009 Animated Literacy he connects the new information of the letter, sounds, etc. with student's prior knowledge. Connecting to a student's prior knowledge will help them remember the new information.

Research Methods

Research Design

Each teacher administered a pretest to their student's to assess which letters they know and which letter sounds they know. The teachers then taught the students the letters and the letter sounds according to the program. The teachers then administered a post test to see which letters and letter sounds the students know now. The alpha level is set at .25 for all testing with this research. The dependent variables were how many letters the students know. The independent variable was Animated Alphabet. In A Statistical Package (ASP) will be run to see it there is a significant difference between the letter and sounds known and Animated Literacy.

Study Group Description

The studied group consisted of 9 Title I classrooms with an average 12 students in each class. The students who attend the Liberty Early Childhood Center are educationally at risk ages 3 to 5 year olds. This education center is a developmental preschool which serves to provide early intervention for children. The purpose of a developmental program is to allow enrichment activities for children who may exhibit delays in the areas of speech/language, cognitive/pre-academic, social, or motor development. Classroom activities are based on a curriculum framework focusing on development of literacy, math, and socialization skills. Eligibility is determined by screening results. Some of the students in the preschool are in the Title I classroom but have an IEP and get special education services.

Data Collection and Instrumentation

Teachers administered a pre and post test to see what letter and sounds the students know. All students were given the same pre and post-test. The pre/post-test will be a teacher created test. There was a column with the letters listed vertically with a line beside the letter. On the line the teacher put a check mark if the student got the letter correct. If the student did not get the letter correct they left the line blank. The teachers used a notecard with nothing written on them but the uppercase letter. The pre-test was given the week of August 22-26th. The post-test was given the week of December 12-20th.

A Statistical Package (ASP) software was used to compute the statistical calculations in this study. A t-test was used to compare and contrast the results of this study. The pre/post-tests along with a Microsoft Excel sheet was used to compile data and results.

Findings

An analysis of student performance was conducted using ASP software. The data in table 1 shows the difference between pre-test and post-test scores for students.

Table 1
t-Test Analysis for 0 years of Animated Literacy and Letters Known

Source	Mean	Mean D	t-test	df	p-value
Pre-test	30.47				
Post-test	57.3	-26.8349	-1.10244E1	1.08000E2	2.17582E-19

Note: Significant when p<=0.25

Using the data collected from the Liberty Early Childhood Center, research was gained from observing the difference between the years of Animated Literacy and letters known. In table 1 it shows that there is a significant difference between the pre and post scores of those students who have had 0 years of Animated Literacy. The t-test is -1.10244E1, the p-value is 2.17582E-19, the Mean D is -26.8349 the mean score was found between the pre and post-test. The Null hypothesis stated that there is no significant difference between Animated Literacy and student knowing letters and letter sounds was rejected. When looking at the p-value 2.17582E-19 is less than the alpha level of .25. The students mean pre-test score is 30.47 and the students showed an increase of letter knowledge after the instruction of Animated Literacy with the post-test mean being 57.3. That is a 27.3 percent increase for those students who have never been in the Early Childhood Center program and been instructed with Animated Literacy.

Table 2
      t-Test **Analysis for 1 year of Animated Literacy and Letters Known**

Source	Mean	Mean D	t-test	df	p-value
Pre-test	48.1				
Post-test	68	-19.8986	-7.57976E0	6.80000E1	1.26937E-10

Note: Significant when p<=0.25

 The results gathered in table 2 shows that there is a significant difference between the

pre and post scores of those students who have had 1 year of Animated Literacy. The t-

test is -7.57976E0 the p-value is 1.26937E-10, the Mean D -19.8986 is the mean score

was found between the pre and post-test. The Null hypothesis stated that there is no

significant difference between Animated Literacy and student knowledge of letters and

letter sounds was rejected. When looking at the p-value 1.26937E-10 is less than the

alpha level of .25. The students mean pre-test score is 48.1 and the students showed an

increase of letter knowledge after the instruction of Animated Literacy with the post-test

mean being 68. That is a 20 percent increase for those students who have been in the

Early Childhood Center program and have been instructed with Animated Literacy for 1

year.

Table 3
   *T-Test* **Analysis for 2 year of Animated Literacy and Letters Known**

Source	Mean	Mean D	t-test	df	p-value
Pre-test	53.1				
Post-test	76.3	-24.1429	-2.1584	6	.0742401

Note: Significant when p<=0.25

      The results in table 3 shows that there is a significant difference between the pre

and post scores of those students who have had 2 years of Animated Literacy. The t-test

is -2.1584 the p-value is .0742401, the Mean D is -24.1429 the mean score was found between the pre and post-test. The Null hypothesis stated that there is no significant difference between animated literacy and student knowing letters was rejected. When looking at the p-value .0742401 is less than the alpha level of .25. The students mean pre-test score is 53.1 and the students showed an increase of letter knowledge after the instruction of Animated Literacy with the post-test mean being 76.3. That is a 23.2 percent increase for those students who have been in the Early Childhood Center program and had been instructed using Animated Literacy for 2 years.

Figure 1
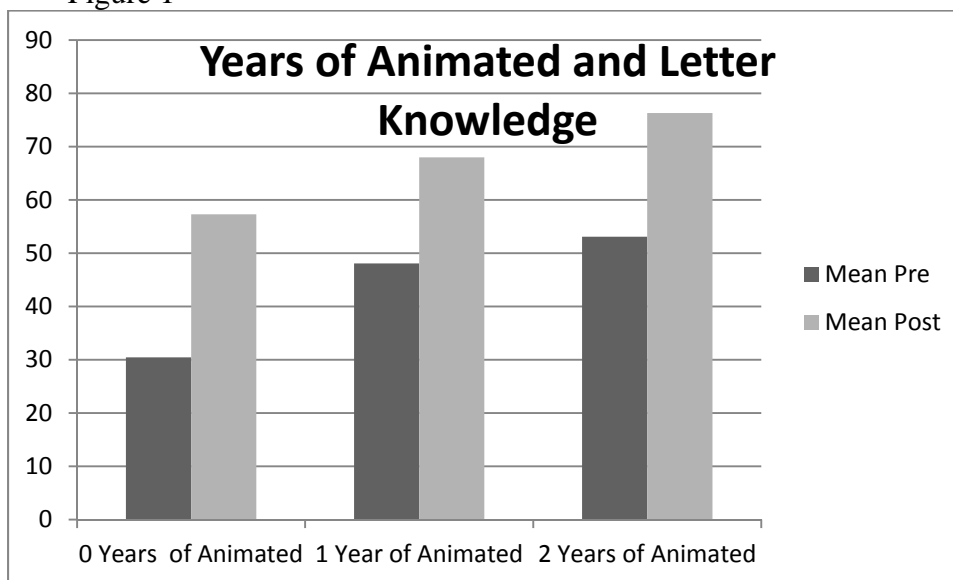
Data found in tables 1, 2, 3 and in figure 1 shows that there is a significant difference in the number of years the students has participated in Animated Literacy and knowledge of letters. Figure 1 shows that no matter how many years a student has been taught letters with Animated Literacy, scores increase from the pre-test scores to post-test. The meaning of these results is that Animated Literacy is beneficial to students learning their

alphabet letters. There could be other instruction methods that could have played a role in the student gain of letter knowledge as well.

Conclusions and Recommendations

The results of this study show that there is a significant difference between pre and post tests on alphabetic knowledge when the Animated Literacy program was used for instruction. The conclusion of this research shows that the Animated Literacy program was successful at the Liberty Early Childhood Center. From students taking the pre-test and then taking the post-test in every year of Animated Literacy the number of letters recognized increased. The research shows that Stone's brain research and getting the students involved as much as possible in the learning of letters is beneficial. Giving the students the action to go with the letter and sound has great success rate. Moore and Whitfield (2009) state that "we understand that all students can and will learn but at different rates and in different ways" (p. 622). Stone reaches these different ways of learning and rates by having student get engaged in the learning by visual, auditory and kinesthetic. Stone has the student's singing, listening, drawing, moving, and making connections.

Something that could have done differently to this research project is doing a pre and post-test before the school modified the Animated Literacy and then doing a pre and post-test after the modifications.

After conducting the research on Animated Literacy and finding out the results, one of the recommendations that would make is that the program is successful and is an effective program for student to learn their letter. A recommendation to this research project would be to have one assessor that assessed all the students. Another recommendation related to assessing is to make it more standardized by having a script when assessing the students. Another recommendation is to compare Animated Literacy

to another reading program for preschool students. When assessing letters a recommendation would be to test letter sounds also. It would have been beneficial to test students who have IEP's to students who do not have IEP's as well.

This study along with the recommendations for further research in the previous paragraph could be implemented in different grade levels up to third. Conducting one or more of these studies at the elementary level would produce a range of valuable data. Using a larger sample should produce results that are more applicable to the general population. Another recommendation would be to find other districts surrounding Liberty that are utilizing Animated Literacy within their alphabetic and phonics instruction. With several districts in the area and across the state sharing similar student populations, research on the preschool and elementary level would be useful for other schools as they implement or modify Animated Literacy programs of their own.

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