

Running Head: Phonics in Early Childhood: Jolly Phonics

Use of Phonics Program with Early Childhood General Education and Special Education
Students

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Abstract

This research was conducted to find out if the Jolly Phonics program is effective for young children with developmental delays 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? Are young children with developmental delays learning as many letters/letter sounds as their non-disabled peers? Does the synthetic phonics approach in Jolly Phonics help the students learn and remember the letters and their sounds?

The research was conducted by giving the students quarterly assessments based on a grade level goal for learning letters and letter sounds. Comparing and finding how students receiving special education services for developmental delays are doing in relation to their non-disabled peers.

The results of this study show that young children with developmental delays when attending an early childhood program where Jolly Phonics is used are achieving grade level phonics goals. The conclusion of this research shows the use of the Jolly Phonic program is a useful tool in student achievement for students in early childhood for meeting grade level phonics goals.

Introduction

Background, Issues and Concerns

The study was conducted in an early childhood center located in a suburban school district. The school district consists of one high school (Grades 9th-12th), one middle school (Grades 6th-8th), five elementary schools (Grades K-5th) and one Early Childhood Center (General Education and Special Education). According to more recent demographic data found on the Missouri Department of Elementary Secondary Education website, the district serves approximately 3,715 students in grades preschool through 12th grade. Furthermore, 25% of the student population qualify for free or reduced lunch and the district graduation rate was 96% in 2013. In the 2012-2013 school year, the preschool's enrollment was 57 students, ages 3-5. The early childhood general education population of this district pays to go to preschool. The rest of the student population at the Early Childhood Center qualify as a Young Child with a Development Delay in one or more of the following areas of physical (gross and fine motor skills), cognitive, adaptive, communication (speech and/or language) and social/emotional/behavioral. The special education students all have an individualized education plan (IEP).

The school district currently uses Jolly Phonics with students in preschool through second grade. A neighboring school district will be initiating a similar program of animated literacy program during the 2013-2014 school year. Teachers at the Early Childhood Special Education Center will begin implementing the animated literacy program with young children with a developmental delay. Teachers and support staff in the neighboring school district have concerns about the benefits of devoting instructional time implementing the animated literacy program and its benefits to developmentally delayed students.

Practice under Investigation

The practice under investigation is the use of phonics programs such as Jolly Phonics or Animated Literacy to teach letters and letter sounds to preschool age students qualifying as a Young Child with a Developmental Delay (YCDD).

School Policy to be Informed by Study

A school district literacy program for early childhood students is the program being studied. The school district has been using the Jolly Phonics program for three years. The early childhood center consists of four classrooms where all teachers are required to use Jolly Phonics somewhere in their daily schedule. Of the four classrooms being studied one is a general education classroom and three are self-contained special education classrooms.

Conceptual Underpinning

“Phonics is the structured relationship between phonemes (sounds) and graphemes (letters)” (Yellin, Jones & Devries 2008 p. 253). Phonics programs are used to help emergent readers learn letters and letter sounds in a meaningful context. (Yellin, et al., 2008). There are many programs available to teachers of emergent readers. The Jolly Phonics program is a multisensory systematic approach to learning. When students are encouraged to learn by being active in a hands on approach they will retain more. In Howard Gardner’s *Frames of Mind: the Theory of Multiple Intelligences* eight intelligences were discussed. Gardner 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), some learn by bodily kinesthetic (learning by ones bodily motions and movements), some learn by music (those who learn by sounds, rhythms, tones and music). Interpersonal and intrapersonal learning also takes place. Interpersonal learning is learning by interactions with others, while intrapersonal learning

is learning by self-reflection and knowing about one's self. Naturalistic learners can relate to one's natural surroundings dealing with environment and for some learning is existential or spiritual. (Yellin, et al., 2008). When using Jolly Phonics students are learning letters and letter sounds through sound, movement and music. When incorporating a multisensory approach learning should, in theory, increase student achievement.

Statement of the Problem

There is a question about whether or not phonics programs, such as Jolly Phonics, should be implemented in an early childhood program with YCDD students when pre-academic skills are not a qualifying area for a young child with developmental delays (YCDD).

Purpose of the Study:

To find out if using Jolly Phonics makes a significant difference in student achievement for 3, 4, and 5 year olds with developmental delays in their ability to learn letters and letter sounds.

Research Question(s):

RQ: Is there a difference in student achievement between 3,4, and 5-year-old children with developmental delays using Jolly Phonics compared to 3, 4, and 5-year-old children without developmental delays using Jolly Phonics.

Null Hypothesis(es):

Ho: There is no significant difference in student achievement between 3,4, and 5 year old children with developmental delays using Jolly Phonics compared to 3,4, and 5 year old children without developmental delays using Jolly Phonics?

Anticipated Benefits of the Study:

This study will be informational to the early childhood special education teachers on the benefits of using phonics programs such as Jolly Phonics or animated literacy with students qualifying as a Young Child with a Developmental Delay (YCDD).

Definition of Terms:

Jolly Phonics: is a systematic synthetic phonics program designed to teach children to read and write. Children learn the 42 letter sounds of the English language, rather than the alphabet. They are then taken through the stages of blending and segmenting words to develop reading and writing skills (Loyd 2000).

Systematic Synthetic Phonics: is a method of teaching people to read by training them to pronounce sounds associated with particular letters in isolation and then blend them together

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: is 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.

Young Child with a Developmental Delay (YCDD): Young Child with a Developmental Delay is a child from ages 3 through 5 who is experiencing developmental delays, as measured by

appropriate diagnostic instruments and procedures, in one or more of the following areas:

physical development, cognitive development, communication development, social or emotional development or adaptive development, and who need special education and related services.

General Education: is the program of education that typically developing children should receive, based on state standards and evaluated by the annual state educational standards test. It is the preferred way of describing its synonym, "regular education." It is preferred because the term "regular" connotes that children receiving special education services are somehow "irregular."

Special Education: is the education of students with special needs in a way that addresses the students' individual differences and needs. Ideally, this process involves the individually planned and systematically monitored arrangement of teaching procedures, adapted equipment and materials, accessible settings, and other interventions designed to help learners with special needs achieve a higher level of personal self-sufficiency and success in school and community than would be available if the student were only given access to a typical classroom education.

Individualized Education Plan (IEP): is a written plan/program developed by the schools special education team with input from the parents and specifies the students' academic goals and the method to obtain these goals. The plan also identifies transition arrangements. The law expects school districts to bring together parents, students, general educators and special educators to make important educational decisions with consensus from the team for students with disabilities, those decisions will be reflected in the IEP.

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.

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. The student population is made up of early childhood general education preschool students and early childhood special education students. The school has been using Jolly Phonics for three years as their literacy program to teach letters and letter sounds. A neighboring school district will be implementing Animated Literacy in the fall of the 2013-2014 school year. The program uses kinesthetic learning and phonological awareness. This study investigated whether or not phonics programs such as Jolly Phonics being used by the Early Childhood Center in this study or Animated Literacy, which will be used by the neighboring school district, are effective programs for teaching letters and letter sounds to a child identified as YCDD.

Review of Literature

Jolly Phonics was developed by Sue Loyd (2000) and the focus is on teaching children to read and write. Jolly Phonics is a systematic synthetic phonics program where children learn the 42 letter sounds of the English language, rather than the alphabet. Loyd (2000) developed this program to help struggling students who were not learning to read and write using the whole language approach of the 1970s (Loyd, 2000). This review will focus on how students learn to read, the importance of teaching reading to all early childhood students, what Jolly Phonics is, and the philosophy behind Jolly Phonics. How some parents, teachers and therapist feel about phonics programs will also be discussed.

Schickedanz and Collins (2013), state there are two processes and two phases of development for learning conventional reading. The processes are decoding and comprehending and the phases are learning to read and then reading to learn. However, Schickedanz and Collins (2013), also state that emergent readers need to engage in meaningful language rich experiences from birth to early childhood to be able to build a foundation for later conventional reading. The authors list the following as the understandings and skills needed when learning to read: print conventions, the alphabet and phonological awareness, and oral language. “The truth is, early childhood professionals must keep many balls in the air right from the beginning. The alphabet is not the place to start, nor is oral language or content knowledge. Early childhood teachers must start on many fronts simultaneously and why curriculum frameworks suggest a wide range of experiences.” (Schickedanz & Collins, 2013, p. 17)

There is a debate among professionals in early childhood special education programs about the benefits of teaching letters and letter sounds to children with developmental delays.

Many professionals in early childhood special education programs do not teach letters and letter sounds because the area of pre-academics is not a qualifying area for a young child with developmental delays. If there is not a goal for learning letters and letter sounds early childhood special education teachers and therapists often feel they should not spend valuable instructional time working on letters and letter sounds when they are not addressed as a goal in a child's individualized education plan. Loyd (2000) developed the Jolly Phonics program to help students, who were struggling with the whole language approach, learn letter sounds which aids students in learning to read. The authors of "Let's Talk: for people with communication needs" also believe early intervention with learning phonics is critical in the preschool years. Everyone involved with the child during the preschool years has a role in helping the child learn phonics and better ready him or her for later learning. (Roth, Paul & Pierotti 2006) Furthermore, many parents would like to see early childhood special education teachers spending instructional time teaching children letters and letter sounds. For some YCDD students, pre-academic skills are an area of strength and parents feel this area of strength should be used to build on other areas of development that are an area of concern in the child's development. According to 22 posts in an online discussion by parents with YCDD children, parents' overall felt phonics instruction and/or learning to read helped their child with speaking and communicating. The majority of parents posting in this online discussion also felt once the child learned letters and/or letter sounds using programs such as Jolly Phonics they then had a more visual reference and producing sounds in speech became easier. This is one way to build on the child's strength and individualize instruction to meet the needs of the child.

There are two main approaches to teaching phonics: analytic and synthetic. Both approaches require the learner to develop the ability to hear and discriminate sounds in spoken

words. Jolly Phonics comes under the synthetic approach. Jolly Phonics is structured to words for whole class or individual use. Teaching of Jolly Phonics is divided into the following five skills: learning letters sounds, learning letter formation, blending for reading, identifying the sounds in words for writing and tricky words/irregular words. All five skills are taught at the same time (Loyd 2000). The use of the Jolly Phonics program agrees with the beliefs of Schickedanz and Collins (2013), who believe teachers need to teach all skills necessary for learning to read simultaneously. Loyd's (2000) Jolly Phonics handbook was developed to give step-by-step guidance for teachers and reproducible worksheets for students. Letter sounds are introduced as quickly as a sound a day. Corresponding actions, sounds and activities are taught with the sounds. Steps 1-5 are all taught at the same time through a multisensory approach. It is suggested for younger children or children with special needs the rate of teaching the letter sounds should be slower (Loyd 2000).

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. Sue Loyd (2000) stated compelling evidence the Jolly Phonics program makes it easier for students to learn to read and write. Furthermore, "this also reflects the findings of research studies that both blending skills and phonological awareness are strong predictors of reading success." (Loyd, 2000, p.2). Many early childhood programs do teach letters and letter sounds, but many early childhood special education programs do not teach letters and letter sounds. Sue Loyd (2000), has created a program with Jolly Phonics that has addressed early instruction that research shows students will learn to read and write earlier with fewer students needing remedial help. Her research and need of a program to aid struggling readers helped her to develop this program. The key elements of her program focus on

systematic synthetic phonics program where the 42 main sounds of English are taught and not just the letter sounds. Schickedanz and Collins (2013), talk about engaging young children in a diverse curriculum to build a foundation for later academic success. Loyd (2000,) talks about the need for a phonics program that will reach children who are struggling with reading and writing. In Loyd's (2000) Jolly Phonics program, she creates a multisensory approach to teaching phonics to struggling readers. Meeting the individual needs young of children with developmental delays during the early childhood years will help better prepare them for later academic success.

Research Methods

Research Design

Each teacher administered a first quarter assessment to assess which letters and letter sounds the students know. The teachers then taught the students the letters and the letter sounds according to the Jolly Phonics program. Quarterly assessments were administered by teachers to all students to see which letters and letter sound the students knew and how many students were meeting the quarterly phonics goal. The dependent variables were how many students met the quarterly phonics goal set for the grade level. The independent variable was the Jolly Phonics program. Descriptive Statistics will be used to analyze the data to see if there is a significant difference between YCDD students and general education students for meeting grade level phonics goals.

Study Group Description

The studied group consisted of one general education classroom and three special education classrooms. The early childhood classrooms in this study are part of an accredited school district. According to more recent demographic data found on the Missouri Department of Elementary Secondary Education website, the district serves approximately 3,715 students in grades preschool through 12th grade. The demographic breakdown of these students is 9.1% black, 6.5% Hispanic and 79.5% white. Furthermore, 25% of the student population qualify for free or reduced lunch and the district graduation rate was 96% in 2012-2013. This education center is a developmental preschool, which serves to provide early intervention for children who are considered to be in the general education population and their peers who are diagnosed as a young child with development delays (YCDD). The purpose of a developmental program is to

provide enrichment activities for children who exhibit delays or are at risk in the areas of communication (speech/language), cognitive, social/emotional/behavioral, or physical (fine motor/gross motor) development. Classroom activities are based on a curriculum framework focusing on development of literacy, math, and socialization skills. Eligibility for special education is determined by professionals on an evaluation team based on the results of a diagnostic evaluation. Students qualifying as YCDD have standard scores of 70 or below in one area of development or 76 and below in 2 or more areas of development. The general education classroom is a paid preschool program open to the public.

Data Collection and Instrumentation

Teachers administered an assessment quarterly to see what letter and letter sounds the students know. All students were given the same assessment. The early childhood teachers to assess students on grade level smart goals created the assessment. The quarterly smart goal for phonics is as follows:

Students will verbally identify letter sounds and letters of the alphabet

Quarter 1- 70% with 11/52 letters and sounds

Quarter 3- 70% with 35/52

Quarter 2- 70% with 21/52

Quarter 4- 70% with 47/52

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.

Statistical Analysis Methods

Descriptive statistics was used to analyze the quarterly data. Using a Microsoft excel spread sheet, scores were entered and the mean, median, standard deviation, maximum scores and minimum scores were computed for general education, special education and grade level. Data was charted and student accomplishments for grade level goals were described for general education, special education and grade level.

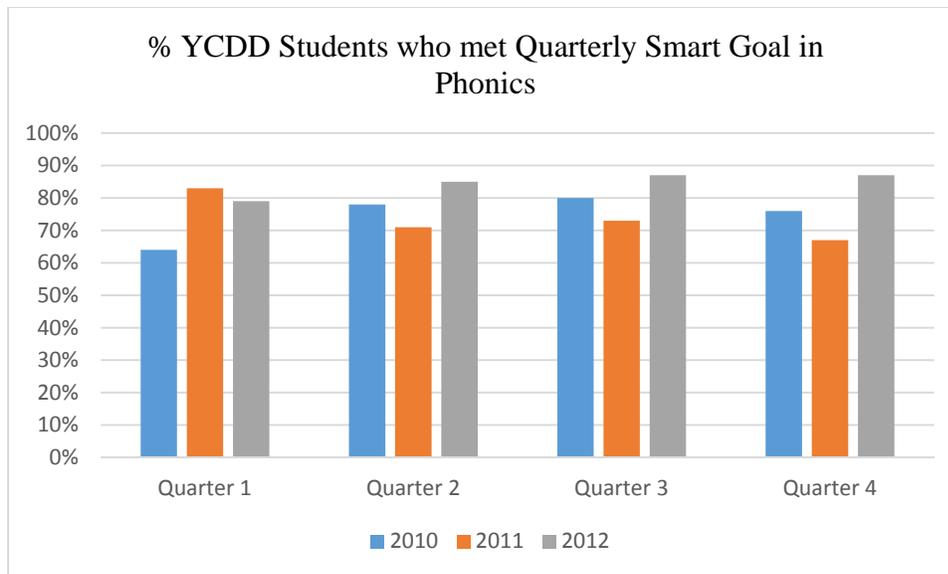
Findings

The school district's early childhood grade level was chosen for comparison. Through the tables, graphs, and narratives below, the comparison of special education and general education students who accomplished the quarterly phonics goal for the early childhood grade level are presented in this descriptive analysis.

YCDD Special Education

Phonics goal	2010	2011	2012
Quarter 1	64%	83%	79%
Quarter 2	78%	71%	85%
Quarter 3	80%	73%	87%
Quarter 4	76%	67%	87%

Mean	75%	74%	75%
Median	77%	72%	86%
St. Dev.	0.072	0.068	0.038
Max	80%	83%	87%
Min	64%	67%	79%

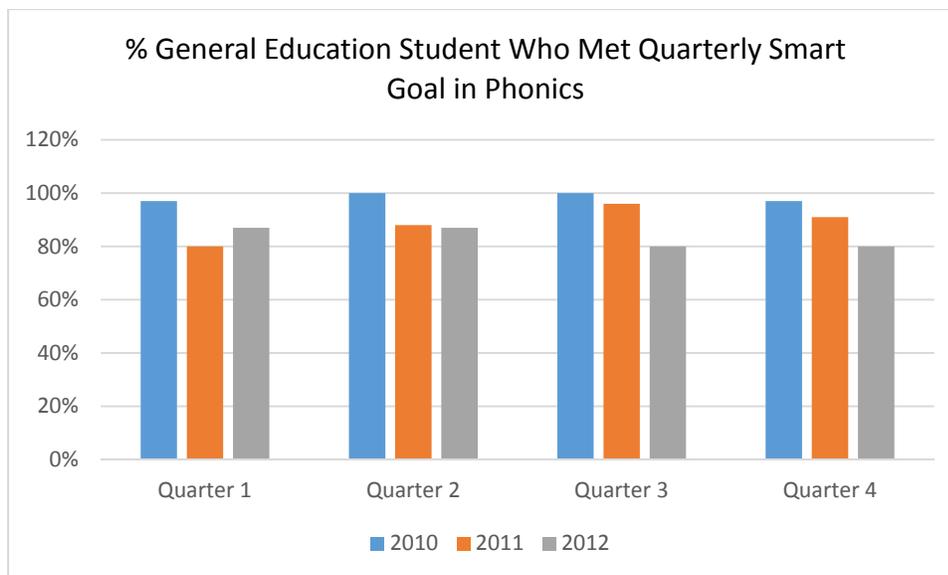


When looking at YCDD percentages for the districts early childhood grade level, YCDD students had the lowest percentage of students who met the quarterly phonics goal in quarter 1 of 2010 with 64% of students meeting the phonics goal. YCDD students had the highest percentage of students meeting the quarterly grade level for the phonics goal during quarter 3 and quarter 4 of 2012 at 87%. In 2010, the early childhood center started using Jolly Phonics, from quarters 1-3 the percent of YCDD students meeting the phonics goal steadily increased. There was a slight decrease during the 4th quarter of 2010. During the second year the early childhood center used Jolly Phonics (2011), there was a steady decrease from quarter 1 to quarter 4 in the percent of YCDD students who met the quarterly phonics goals. The third year the early childhood center used Jolly Phonics (2012), the percent of YCDD students who met the quarterly phonics goal steadily increased from quarter 1 to quarter 4. The greatest percentage of YCDD students who met the grade level phonics goals occurred in 2012 quarters 3 and 4 with a percentage rate of 87% for both quarters. The mean percentage for YCDD students meeting the quarterly phonics goal was approximately 75% for all three years.

General Education

Phonics goal	2010	2011	2012
Quarter 1	97%	80%	87%
Quarter 2	100%	88%	87%
Quarter 3	100%	96%	80%
Quarter 4	97%	91%	80%

Mean	99%	89%	84%
Median	99%	90%	84%
St. Dev.	0.017	0.067	0.040
Max	100%	96%	87%
Min	97%	80%	80%

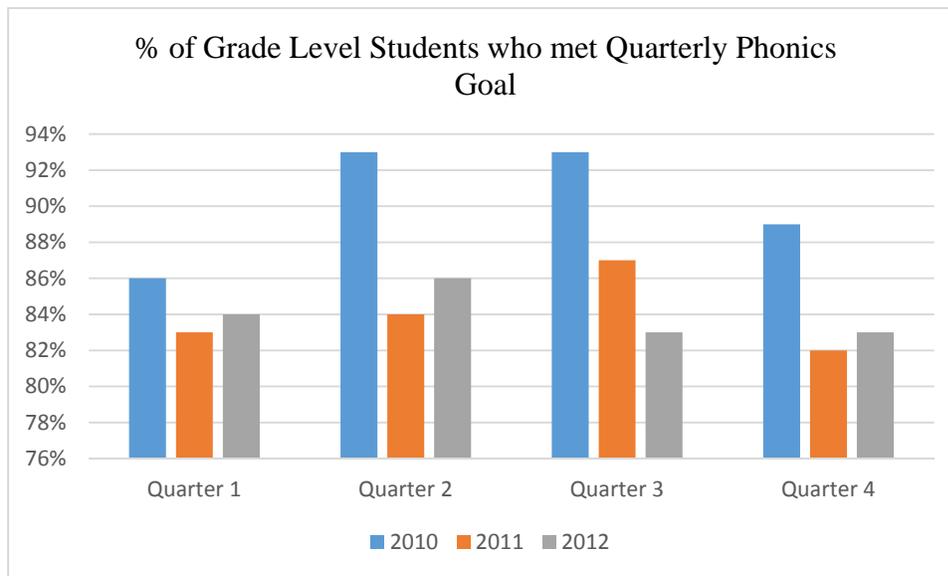


When looking at percentages for the early childhood grade level, general education students had the lowest percentage of students who met the quarterly phonics goal in quarter 2 (2010), quarter 3-4 (2012) with 80% of students meeting the phonics goal. General education students had the highest percentage of students meeting the quarterly grade level phonics goal during quarter 2 and quarter 3 of 2010 at 100%. In 2010, the early childhood center started using Jolly Phonics, from quarters 1-3 the percent of general education students meeting the phonics goal steadily increased. There was a slight decrease during the 4th quarter of 2010. During the second year the early childhood center used Jolly Phonics (2011), there was a steady decrease from quarter 1 to quarter 3 in the percent of general education students who met the quarterly phonics goals. There was a slight decrease in 2011 from quarter 3 to quarter 4. The third year the early childhood center used Jolly Phonics (2012), the percent of general education students who met the quarterly phonics goal steadily decreased from quarter 1 to quarter 4. The greatest percentage of general education students who met the grade level phonics goals occurred in 2010 quarters 2 and 3 with a percentage rate of 100% for both quarters. The mean percentage for general education students meeting the quarterly phonics goal decreased from 99% to 84% from 2010-2013.

Grade Level

Phonics Goal	2010	2011	2012
Quarter 1	86%	83%	84%
Quarter 2	93%	84%	86%
Quarter 3	93%	87%	83%
Quarter 4	89%	82%	83%

Mean	90%	84%	84%
Median	91%	84%	84%
St. Dev.	0.034	0.022	0.014
Max	93%	87%	86%
Min	86%	82%	83%



When looking at percentages for the early childhood grade level, as a grade level students had the lowest percentage of students who met the quarterly phonics goal in quarter 4 of 2011 with 82% of students meeting the phonics goal. As a grade level, early childhood students had the highest percentage of students meeting the quarterly grade level phonics goal during quarter 2 and quarter 3 of 2010 at 93%. In 2010, the early childhood center started using Jolly Phonics, from quarters 1-3 the percent of early childhood students meeting the phonics goal increased. There was a slight decrease from the 3rd to 4th quarter of 2010. During the second year the early childhood center used Jolly Phonics (2011), there was a steady increase from quarter 1 to quarter 3 in the percent of early childhood students who met the grade level quarterly phonics goals. There was a decrease in 2011 from quarter 3 to quarter 4. The third year the early childhood center used Jolly Phonics (2012), the percent of early childhood students who met the quarterly phonics goal increased from quarter 1 to quarter 2, decreased from quarter 2 to quarter 3 and increased from quarter 3 to quarter 4. The greatest percentage of early childhood students who met the grade level phonics goals occurred in 2010 quarters 2 and 3 with a percentage rate of 93% for both quarters. The mean percentage for early childhood students meeting the grade level quarterly phonics goal decreased by 6% from 2010-2013.

Conclusions and Recommendations

The results of this study show a mean student achievement of 75% for 3, 4, and 5 year old children with developmental delays using Jolly Phonics compared to a mean student achievement of 84% and above for 3, 4, and 5 year old children without developmental delays using Jolly phonics over a three year period for the grade level phonics goal. Although the percent of general education students meeting the phonics goal was 9% (or more) greater, the conclusion of this research shows that disabled and non-disabled students participating in the Jolly Phonics were meeting quarterly grade level phonics goals at 75%. The research shows that Loyd's multisensory approach which meets the variety of learning styles of individual students when learning letters is beneficial. Giving the students actions, music and writing to go along with learning letters and letter sounds has a great success rate. Schickedanz and Collins (2013) state, "It is essential to help children build strong foundations for both learning to read and reading to learn in the years before formal schooling" (p. 3). Loyd builds these foundations by having students get engaged in learning through a multisensory approach. Loyd steps outside the box and away from the whole language approach that is not right for all learners and has students singing, listening, writing and making connections.

Something that could have been done differently to this research project is doing a pre and posttest assessment prior to the school starting the Jolly Phonics program three years ago. Comparisons could then be made on Jolly Phonics program and individual student achievement.

After conducting the research on student achievement toward grade level a grade level phonics goal it can be concluded that programs such as the Jolly Phonics programs aid student achievement for students with developmental delays in relation to their non-disabled peers. It would be recommended to make this research standardized to have one assessor assess all

students and use the same script for assessing all students. Furthermore, as previously mentioned it would be recommended to assess students prior to beginning a new phonics program. Lastly, it would be recommended to compare the Jolly Phonics program to other phonics programs such as Animated Literacy.

This study along with recommendations for further research could be implemented in the primary grades. The information would be useful to district professionals as they look at phonics programs to implement with their YCDD students when providing services in their least restrictive environments. With researched data to support student achievement in the area of phonics in early childhood, educators can better prepare all students for common core driven instruction in the primary grades

References

Schickedanz, J. A. & Collins, M. F. (2013). *So much more than abcs: The early phases of reading and writing*. National Association for the Education of Young Children.

Roth, F. P., Paul, D. R. & Pierotti, A. (2006). Let's talk: For people with special communication needs. *American Speech-Language-Hearing Association (ASHA)*. Retrieved from <http://www.asha.org/public/speech/emergent-literacy.htm>

How on earth does a child learn to read when he can't speak properly. (2013, June 18). Retrieved from <http://www.mumsnet.com/info/search?query=primary+education>

Loyd, S., (2000). *The phonics handbook: A handbook for teaching reading, writing and spelling*. United Kingdom, Jolly Learning, Ltd.

Yellin, D., Jones, M. B., Devries, B. A., (2008). *Integrating the language arts*.Scottsdale, AZ: Holcomb Hathaway, Publishers, Inc.

I was trained in the use of the Jolly Phonics programme and experienced remarkable results with remedial readers. It utilizes a unique blend of phonemic awareness, phonics, writing, use of stories and actions that work with young children. As widely accepted presently, early childhood education and development are closely intertwined and impossible to truly set apart. Adults, living in pandemic times, are pivotal actors in the way this challenging time integrates children's development. In one school of thought education starts when a child is born. Reading and writing can be named as early childhood reading and writing or ECRW. I'm a current public scholar student in the field dedicated towards early childhood special education. Why is phonics important in early childhood settings? What are some evidence-based strategies for teaching phonics? When would you like to start? This is a general, introductory course aimed at anyone supporting children to prepare for school, including parents, educators and workers in early childhood education and care (ECEC), centre directors, early primary school teachers, and education leaders. For Australian educators, this course aligns with the following Australian Professional Standards for Teachers (APST) Early childhood education (ECE; also nursery education) is a branch of education theory that relates to the teaching of children (formally and informally) from birth up to the age of eight. Traditionally, this is up to the equivalent of third grade. ECE emerged as a field of study during the Enlightenment, particularly in European countries with high literacy rates. It continued to grow through the nineteenth century as universal primary education became a norm in the Western world. In recent years...