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An Examination into the Instruction of the Alphabet During Preschool Years

Amanda Titus

Eastern Illinois University

This research is a product of the graduate program in Elementary Education at Eastern Illinois University. Find out more about the program.

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During Preschool Years

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Amanda Titus

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An Examination into Instruction of the Alphabet During Preschool Years

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Abstract

Instruction of the letters of the alphabet is a controversial topic among early childhood educators. Not only is it debated whether letter instruction is developmentally appropriate but there is then the discussion concerning how the letters are best taught once a program deems it is developmentally appropriate. In this study, 87 children were assessed at two separate times during the school year to determine a method of instruction that proved most effective. The study took place over three consecutive school years. The first year, 27 students were exposed to alphabetic instruction through a combination of music and mnemonic device assisted instruction. Also utilized was a curriculum that connected letter name and sound to a motor function to assist in muscle memory retention. The second year, 31 students received only imbedded alphabetic instruction, still utilizing the motor connection to the letter name and sound. Finally, during the third year, 30 students received direct daily instruction on the names of letters and sounds, what some might call rote memorization instruction. While all three years show substantial student growth and retention of the letters, the three methods do not provide equal growth. The implications might be that one method could be more effective than the others.
Dedication Page

This project is dedicated to my loving husband, Andrew. His devotion to our family made the time I needed to complete my masters and thesis possible. I also want to dedicate this work to my children, Lizzy, Cooper, and Briggs.

A true dedication could not be given without the assistance and love of my parents, Sandra and Charles Szatkowski. The words can and not were never allowed to be in my vocabulary. Without the values they instilled in me at a young age my drive to learn and achieve would never have allowed me to reach this moment in my life.

Also, my siblings, Tyler, Julia, and Phil, brother in-law, Luis, and niece, Audri, without whom my determination and drive to complete this work would not exist. My family is my saving grace and I could not have come this far in my educational career or life without their support and love.
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An Examination into Instruction of the Alphabet During Preschool Years

Alphabet instruction is a contentious topic in the Early Childhood classroom. For years, teachers have struggled to determine which principle to follow. Several theories regarding various types of instruction, such as The Enhanced Alphabet Knowledge Lesson Components, music instruction, use of mnemonics, and direct or embedded forms of implementation, have been around for years with research backing many of them. It seems the primary paradox of Early Childhood Education is balancing instruction; keeping instruction both developmentally appropriate as well as functional. This study has been conducted over three years to determine an applied method that is the most effective. Yielding the research question: What is the most effective method of alphabetic instruction: Multi-sensory/Musical Method, an imbedded instruction, or direct instruction?

**Literature Review**

The ability to identify letters and their corresponding sounds represents a significant achievement for preschool and kindergarten-aged children and serves as a cornerstone of their continual literacy development (Snow, Burns, & Griffin, 1998). Achievement is not simply the ability to sing the ABC song but the ability to identify letter names. Also, students recognize each letter has a corresponding sound or in some cases, sounds, that connect to create words which can be read by placing the sounds together and ultimately, provide meaning. The process of understanding that written spellings corresponds to spoken words is called alphabetic principle. A child’s understanding of alphabetic principle is a predictor of future reading success (Heroman & Jones, 2010). The research conducted by the National Early Literacy Report (NELP) indicated, when measured in preschool and kindergarten, a strong connection between early
ability to identify letters of the alphabet played a later role in the ability to decode, comprehend reading, and to spell (National Early Literacy Panel, 2008.)

**Rationale for Instruction During the Early Childhood Years**

Literacy learning begins when a child first leaves the womb. The ability to learn and retain information is as innate as the instinct to cry when an infant has a need that must be met or to seek nourishment when hungry. In the early childhood years, birth to six, children are exposed to the development of reading and writing behaviors that will ultimately form the foundation for conventional literacy. Unfortunately, many children are not raised in environments that assist in developing the most effective early literacy skills. Whether these experiences are through preschool attendance or simply exposure in the home, prior knowledge is not often provided effectively. By age three, differences in children’s understanding and use of literacy skills are enormous (Heroman, Burts, Berke, & Bickar, 2010).

Learning letters encompasses familiarity with 26 upper and 26 lowercase letters. There are 40 distinctive shapes for early learners to memorize; 40 because there are 12 upper and lowercase letters that are identical (Ss, Ww, Mm) (Ehri & Roberts, 2006). After reviewing research, Ehri and Roberts (2006) have determined that letters of the alphabet are the early literacy skills parents most directly instruct to their children. Individuals who receive instruction from parents in letter naming know more letters in comparison to students who have not had the prior exposure or parent interest (Ehri & Roberts, 2006). The National Reading Panel (2000) released a report stating that there are five key components to the attainment of literacy skills. The five areas stated were phonemic awareness, phonics, fluency, vocabulary, and comprehension. Letter identification relates to phonemic awareness, phonics, and fluency. A
student’s ability to correctly identify letters of the alphabet is a beginning step in learning to read (Neal & Ehlert, 2007).

Likewise, another report was issued by the National Early Literacy Panel (NELP) in 2008. NELP (2008) again reiterates the importance of the early year literacy development being critical to a child’s ability to thrive with later academics. NELP (2008) also makes the statement that those children who are unsuccessful with reading and writing by the end of their years in primary grades are at severe risk for academic failure. Those children who tend to fall into the category of having delayed literacy development tend to be those who lack prior knowledge, received poor exposure to verbal abilities from members of the household or childcare settings, do not exhibit phonological understanding, lack knowledge of the basic mechanics of reading, and struggle with letter knowledge (National Early Literacy Panel, 2008; Snow, Burns, & Griffin, 1998).

Dr. Lilian Katz, professor emeritus, at the University of Illinois at Urbana-Champaign guided early childhood programs with her statement published within the Illinois Early Learning and Development Standards, Preschool, (IELDS). She reminded early childhood educators that the goal of early implementation of literacy skills is not to teach rote memorization of 201 skills but to instruct in ways that allow children to apply their developing basic literacy abilities in purposeful ways (Illinois State Board of Education, 2013). Early childhood educators need to begin early instruction of the letters and sounds because it allows children time to learn how to use the skills in more applicable ways for their needs. “After all, literacy...skills are not ends in themselves but basic tools that can and should be applied in the quest for understanding” (Illinois State Board of Education, 2013, p.3). The research completed by the Illinois State Board of
Education (ISBE) prior to and during 2013 indicated that proper language and literacy instruction at an early age go hand in hand, validating its necessity for later success in learning.

Each of the standards pertaining to alphabetic instruction is written to be developmentally appropriate and attainable for children three to six years of age (Illinois State Board of Education, 2013). One specific standard in IELDS is Learning Standard 4.B: Demonstrate an emerging knowledge and understanding of the alphabet. Benchmarks under this standard include:

- 4.B.ECa: With teacher assistance, recite the alphabet.
- 4.B.ECb: Recognize and name some upper/lowercase letters of the alphabet, especially those in own name.
- 4.B.ECc With teacher assistance, match some upper/lowercase letters of the alphabet.
- 4.B.ECd: With teacher assistance, begin to form some letters of the alphabet, especially those in own name.

ISBE (2013) also provides examples so teachers may address these benchmarks. The examples can be implemented based on what is developmentally appropriate for the group of children in attendance at the time. The examples range from simply singing the alphabet with the classroom, to matching more than three upper-and lowercase letters (Illinois State Board of Education, 2013).

What Educators Need to Consider When Instructing the Alphabet

It is up to the early childhood educators in preschool and kindergarten to be educated in methods of alphabet instruction to ensure that children receive both intentional and embedded instruction of the letters and sounds of the alphabet (Piasta, 2014). Teachers of the early childhood grades should use assessment to guide their instruction of the letters and sounds rather...
than using a whole group, one size fits all instructional method (Stahl, 2014). There are some letters that children do not need as much time to learn as others, so prolonged focus on them is tedious and time that could be used on other letters. Therefore, a common practice in preschool and kindergarten, the letter of the week, is not a necessity and can be removed from practice. Small group instruction of four to five children, focused on letters that all five children struggle with is most effective practice (Piasta, 2014).

**Use assessment to determine a starting place for instruction.** Research indicates that teachers should conduct diagnostic alphabet assessments designed to determine which letters and sounds children need to work on during instruction. Educators then need to examine the letter names and sounds that children demonstrate they do and do not know, then determine who will receive instruction on which letters based on the results of the assessment. Plan, then use effective teaching practice to deliver alphabet instruction on the selected letters (Piasta, 2014). Alphabet instruction can take place in various authentic contexts but can also be intentional and explicit. Piasta’s (2014) research recommends that teachers:

...use aids such as keyword or picture cuing systems, combining alphabet and phonological awareness instruction through use of labeled picture cards, teaching letter names and sounds simultaneously, and instruction of both upper and lower case letters at the same time are all research proven and effective ways to incorporate instruction (p. 206).

“When was the last time that you engaged in a compelling discussion about teaching the letters of the alphabet?” (Stahl, 2014, p. 261). The answer for most educators is typically yesterday, last week, a month ago, last year. This question is constantly at play in this teacher researcher’s mind and being considered in various schools right now.
Early childhood educators are unsure if the way letters and letter sounds are being taught is the most effective way to spend time. Educators know and understand how important it is to teach the letters at an early age. “Knowledge of letter-sound associations or the ability to match a letter with the sound it makes is related to the ability to sound out and to spell words” (Huang, Tortorelli, & Invernizzi, 2014, p. 182). Depending on the preschool program in question, some teachers only have children in attendance for two and a half hours each day. Time must be used effectively and carefully, to a precise measure. As educators have so many regulations from both the state of Illinois’s learning standards, Illinois Early Learning and Development Standards (IELDS), as well as the Early Childhood Environmental Rating Scale (ECERS) that control the minutes spent throughout the day, efficiency is vital. Some children are enrolled for two or three years so there is plenty of time to help them learn the letters. However, some children only get one year. With additional expectations from Common Core or individual State Standards, entering Kindergarten can be especially difficult for a child if he or she is not identifying all the letters and sounds made by the letters. A very rigorous curriculum can be found in most Illinois schools for all ages of children and prior knowledge of the letters and their sounds is vital for success. Instruction on multiple letters each week is recommended to ensure that all 26 letters can be taught in a timely fashion and allow time for instruction on other kindergarten readiness skills (Stahl, 2014).

Allowing adequate time per letter also gives early childhood educators the opportunity to teach the letters and still have time for instruction on other pre-readiness skills. One way for educators to evaluate which letters need the most time allowed for instruction is to conduct assessments on which letters children are already demonstrating knowledge of and which they will need the most intense instruction and exposure. In today’s school systems assessment is the
center of all lesson planning. Nothing is to be taught without justification of need. Instruction of the letters in preschool should be no different. Use of formative assessment allows preschool teachers the ability to determine grouping, pace, and ensures content is relevant to student needs (Piasta, Phillips, Williams, Bowles, & Anthony, 2016). When an educator is aware that students already are demonstrating a command over a letter through assessment it allows the opportunity to follow the guidelines of Stahl (2016) and spend a limited amount of time focused on that letter. Likewise, if students are showing little knowledge of the letter, it is recommended to spend additional time to allow mastery (Piasta, et al., 2016).

**English as a second language.** There is an ever-growing population of students in the United States education system who do not use English as a primary language. The primary method of instruction in most schools is currently English, placing students who have a limited proficiency in English at a disadvantage (Wong, Indiatsi, & Wong, 2016). Educators instructing children in the alphabet need to be considerate of these language differences and how they can best assist their students learning despite linguistic differences (Wong, et al., 2016).

For teachers who work with students using English as a Second Language, they must be cognizant that some letters are pronounced differently based on the native language. While the vowels, (a, e, i, o, and u), look the same in Spanish, they have different equivalent sounds. The teacher who is aware of these differences is able to assist a child to understand and say words in English before expecting them to distinguish sounds accurately or use invented spelling (Peregoy & Boyle, 2000).

A key in reaching children who are ESL, and identifying any assistance they need in building the bridge between their home language and acquisition of the letters of the alphabet in English, is early instruction and interventions (Quiroga, Britton, Mostafapour, Abbott,
Berninger, 2002). While conducting research, it was found that receiving a 30-minute session of direct instruction with an interventionist twice a week for six weeks assisted the children in improving their letter knowledge. Children received explicit instruction on the alphabetic principle in both English and Spanish, their home language (Quiroga, et al., 2002). The implication can be made that students retain letter knowledge best when instruction is delivered in home and second languages, and delivered in a consistent structured manner.

**Students with special needs.** One of the most challenging aspects for any educator is reaching children who have special learning needs. Integrating movement into learning, whether it be whole body, hand motions, or eye movements, has proven to be an effective way to reach children who appear unreachable using conventional techniques (Walter, 2010). This method is a similar approach to utilization of Jolly Phonics, pairing a motion with a letter to engage motor memory. Jolly Phonics is a child centered style of teaching letters through synthetic phonics. With actions for each of the 42 letter sounds, the multi-sensory system is encouraging to many of its early learners (Jolly Phonics, 2017).

Another aspect for educators to remember when working with individuals who have specific learning needs is to keep instruction specific and authentically tailored to that child’s needs (Xu, Chin, Reed, & Hutchinson, 2014). Assessment may need to be completed, or at least a familiarity with the student’s ability to work and retain information through observations will need to be collected. When an educator truly knows a child, it makes it even easier for the educator to create a plan that effectively engages and holds the child’s interests long enough to retain information (Piasta, 2014).

Finally, educators who provide home to school connections in alphabetic instruction will see greater results than those who do not. A weekly notice as to what letters or letter will be
addressed and a quick activity for children and parents to complete in regards to the letter(s) are all that are necessary (Dynia, Lawton, Logan, & Justice, 2014). Children who see their parents showing a common interest in their school work are more likely to retain the materials presented by their family because of the previously established relationship within the family unit (Norwalk, Diperna, Pui-Wa, & Qiong, 2012).

Methods of Alphabet Instruction

While educators are aware that letters and their corresponding sounds need to be taught at an early age, there is much debate on how the letters can be most effectively taught. Several methods have been researched.

The Enhanced Alphabet Knowledge Lesson Components. Research is currently pointing to the effectiveness of The Enhanced Alphabet Knowledge Lesson Components as recommended by Jones and Reutzel (2012). Their work indicated that certain letters are harder to learn; likewise, some are easier to learn. Some are easier to pronounce at ages three to six while some are developmentally more challenging (Jones & Reutzel, 2012).

Children typically notice whether a letter has straight or curved lines first. Therefore, round letters tend to stand out the most, O or C. Letters that have curved lines, P or S, are next. Letters having curved lines with intersections such as B and R are distinguished from those without intersections, S and J for instance. Finally, letters with diagonal lines K and X are usually recognized last, and easily confused, therefore requiring more time for mastery. While this progression is typical, children will usually identify letters in their names regardless of the previously stated guidelines. These letters are of greater significance to them. Real life application is visible to children when the letters apply to something that belongs to them, such as their names (Heroman & Jones, 2010).
Similar research showed that the common sequence of learning letter names is more evident when looking at the extreme ends of letter knowledge (Phillips, Piasta, Anthony, Lonigna, & Francis, 2012). It was found that preschool aged children tend to pick up on the naming of letters with curved lines and are visually distinct from other letters more quickly than letters that look or are named something similar to another letter. Parallel to the research conducted by Heroman and Jones (2010), O, A, and B tend to be learned first while U, V, and Q present more challenges. Possibly, the connection for easy acquisition with A and B must related to the alphabet song and sequence of instruction (A-Z) in many preschool classrooms (Phillips, et al., 2012).

Moreover, what the research of all three teams (Heroman & Jones, 2010; Jones & Reutzel, 2012; Phillips, et al., 2012), concluded was that there are letters that are easier to learn. Furthermore, there is no clearly defined order for letter instruction. Letters do not need to be taught in sequential order (A-Z) or by any other methodical order. As long as early and appropriate exposure occurs, children will learn the letters. There is a discernable pattern for which letters are mastered first as noted by the research above however; the key is the exposure at developmentally appropriate times and amounts.

**Music instruction.** Recent studies have established a correlation between music and acquisition of written language. Music aids in the establishment of phonological awareness (Bolduc, 2008). Gromko (2005), attempted to determine the effect music instruction has on phonemic awareness, if any. Gromko (2005) examined 20 years of research and agreed with the conclusions many of the studies had reported; phonemic awareness is one of the best predictors of how well children will learn to read. As a result, individuals from the National Reading Council (2000) conducted a meta-analysis on research in phonemic awareness instruction.
Evidence concluded that children enrolled in at least four months of music instruction were able to development a more dominant understanding of phoneme segmentation ability when compared to the same age child who did not receive four months of music instruction (Gromko, 2005).

Hille, Gust, Bitz, and Kammer (2011), examined the association between learning of music and intelligence. Boys who had been enrolled in music education classes or played instruments showed a positive association between music education and general cognitive ability as well as a specific language link (Hille, et al., 2011). These boys also showed higher IQ scores (Hille, et al., 2011).

Standley (2008) used a meta-analysis to determine an association between music instruction and children’s early ability to read. Her research found specific evidence that “music activities that pair alphabet recognition with phonetic patterns, incorporate word segmentation and sound blending skills, and promote rapid decoding skills are effective in enhancing reading instruction” (Standley, 2008, p.17).

The research question for this study is very similar. This study looks at a more specific subskill of reading ability, letter and sound recognition. This skill is the first of many early learning skills that must be achieved for children to develop phonemic awareness and then, essentially, to learn to read.

**Mnemonic devices.** Researchers are currently trying to assist beginning readers who are showing early signs of struggling to learn to read. The researchers recommend that these beginning readers learn the alphabetic principle through mnemonics and integrated picture mnemonics. Integrated picture mnemonics encompasses building an easily recognizable picture around the letter shape. For example, the letter “C” can be characterized by a photograph of a
crab or a cat (DiLorenzo, Rody, Bucholz, & Brady, 2011). Houghton Mifflin Harcourt Company, publishes a product called Alphafriends, which appears to provide children with an integrated picture mnemonic strategy as well (Houghton Mifflin Harcourt, 2016).

Another curriculum that utilizes the integrated picture mnemonics method is *Itchy’s Alphabet*. Itchy’s focuses on letter-shape-sound connection to encourage association using a set of child-friendly pictures, incorporating the letter shapes within the picture (Larson, 2001). *Itchy’s Alphabet* provides educators with materials and lessons that promote a unique multiple modality process for learning letter-sound association and letter formation as well as developing phonological awareness skills, beginning spelling, and writing (Larson, 2001).

Handwriting Without Tears (2016) is a curriculum designed to teach children how to print effectively; their tools are used to learn how to build letters, and is seen in many preschool classrooms to demonstrate traits of letters. Use of mnemonics are present throughout their curriculum while children move, touch, feel, and manipulate real objects in order to create a muscle memory that allows children to remember specific traits of each letter and commit it to a working memory file (Handwriting Without Tears, 2016).

**Embedded instruction.** In the early childhood environment, teachers are encouraged to follow the lead of the students in the room, allowing all children equal opportunities at learning success. The use of embedded instruction allows for teachers to take that lead and use it for the betterment of student growth and development. Embedded instruction is recommended to ensure all students have unique learning needs met based on observation, and trial-and-practice play based activities (Grisham, Pretti, Hawkins, & Winchell, 2009). Embedded instruction is a systematic teaching strategy were learning opportunities are created by classroom teachers using
intensive, individualized, and intentional instruction that is incorporated into the context of ongoing classroom activities and routines (Frontczak & Bricker, 2004).

**Direct instruction.** When speaking in generalities, direct instruction is a teaching method used in education when instruction is delivered in ways that are structured, sequenced, and intentionally led by an educator. In other words, teachers are “directing” the instructional process; instruction is essentially “directed” at students (Education Reform, 2017). Direct instruction is more effective and efficient in the acquisition of phonological awareness skills for preschool children with language delays (Justice, & Kaderavek, 2004). Students who are considered to be of low income levels also benefit greatly from direct instruction. Direct instruction was also more useful in the simplification of emergent literacy skills to probe generalization sessions, as well as in the percentage of maintained skills (Botts, Losardo, Tillery, & Werts, 2014). Preschool children who are at risk of acquiring foundational skills necessary for the development of conventional literacy benefit from an explicit, systematic instructional approach. Direct instruction provides the structure necessary to promote effective and efficient acquisition of skills, as well as generalization and maintenance of learning. (Botts, Losardo, Tillery, & Werts, 2014).

**Methodology**

The following data contains a population of children who are three to five years old. There are a mix of male and female participants. All children, with and without IEPs, in the principal investigator’s classroom participate in the study over the last three consecutive school years. Any children, who had data collected for one reporting period but not the other due to relocation of the family, leaving the district, were excluded from the study. There were not any students in the three years who were determined to be English as a Second Language Learners.
Any children, who had data collected for one reporting period but not the other due to relocation of the family, leaving the district, were excluded from the study. There were not any students in the three years who were determined to be English as a Second Language Learner. The study was conducted in the principal investigator’s preschool classroom, located in Central Illinois. The preschool is a Preschool for All program funded by Preschool for All and Preschool Expansion Grants through the Illinois State Board of Education. The preschool has three half-day Blended Preschool classrooms, and one half day Early Childhood Special Education classroom. There are also, two Full-Day Early at Risk Preschool Classrooms specifically for children in their last year prior to Kindergarten who are below a specific income level, have a disability, or family involvement with the Department of Child and Family Services. There were approximately 140 children being served by the preschool in the school district at the time of this study.

Measures. A program called Teaching Strategies GOLD to monitor student progress was utilized throughout the years. The same program has been utilized to document student growth over the last three years. This system gives children a leveled score of one through nine, based on where their capability falls. The lowest rating a child can receive is a not yet, indicating simply as it states, the child does not yet meet any of the indicators listed.

Classes are broken into two sections, P3 and P4. The sections are decided based on the age of the children on the first day of the school year. P3’s started the year at three years old, P4’s started the year at four years old. Even if they are a year older now, they stay in the group they started with at the beginning of the year. For letter recognition, P3’s should be scoring between Levels 2 to 4, P4’s should be scoring between Levels 2 to 5. In the area of letter recognition: Level 2 is defined as a child who can recognize and name a few letters in his/her
own name. Level 4 is when a student recognizes and names as many as 10 letters, especially those in his/her own name. Level 6 is when a student identifies and names 11-20 upper- and 11-20 lowercase letters when presented in random order. Level 8 is when a student identifies and names all upper- and lowercase letters when presented in random order. Levels 1, 3, 5, 7, and 9 are scored when children are considered to be between levels. If a child is able to complete only a couple of the requirements in one level but completes all requirements of the lower level, they fall at the in-between level. These levels have all been determined based on what is developmentally appropriate for typically developing children based on research and widely held expectations completed by Teaching Strategies.

**2014-2015 Participants/Methodology.** There were 27 students, of mixed genders, enrolled in this school year between two sections, one in the morning one in the afternoon. P3 grouping consisted of one girl and five boys. The P4 group had nine girls and 12 boys. Each session lasted two and a half hours. Of the 27 students, 19 were deemed to be low income as set by federal guidelines; this rate is roughly 70 percent of the class. Ten were diagnosed with a developmental delay.

Data was collected for three school years. Data collection began during the 2014-2015 school year. Each school year a different method has been used as the primary instructional practice. Initially, in 2014-2015 the teacher researcher created a song, following the Music Instruction Methodology, similar to the ABC’s to attempt to teach children letter recognition and sounds. “A says (the sound a), A says (the sounds a), (the sound a, a, a, a, a, a).” The song then continues through all the other letters of the alphabet following the same words simply substituting the next letter in order. While singing, students also utilized the Jolly Phonics, Mnemonic methodology, hand motions, and were shown a picture of the letter. Noted by the
teacher researcher was that pairing motions to songs aids in attention and retention. At that time, the teacher researcher attempted to differentiate instruction by using motion, seeing, and hearing.

Each day, students began with calendar time and would sing the “A, B, C Song”, as they decided to call it. The song does start to drag toward the middle because it is a longer song with all 26 letters but when given prompts to sing in different pitches, or at a faster/slower rate student attention would return. Upon deciding to teach the “A, B, C Song” baseline data was collected. It had been the fear of the teacher researcher for quite some time several children were not retaining the information as necessary to learn all the letters and sounds by the end of the year. The baseline information showed the class, as a whole, was meeting requirements, but just barely.

Upon introduction of the letters, children would utilize the method of “building a letter” provided by Handwriting Without Tears (2016). In this activity children were called forward to the front of the carpet to examine the unique qualities of the letter being presented at that time. The teacher researcher presented the child with a laminated upper or lowercase letter and several pieces of wood. These pieces of wood ranged anywhere from the full length of the laminated paper, to a quarter of the paper, some pieces were curved while others resembled a straight stick. Students had to determine if they needed curved edges, straight lines, full length, or partial, and where the pieces of wood needed to be placed to in order to accurately create a replica of the letter.

When baseline data was collected, children were presented with a piece of paper with 26 upper and 26 lower case letters in random order. Children were asked to name the letters and state their sounds. The teacher researcher noted on the page the letters children stated correctly and what their error was, if applicable. Later, that same document was used to compare with the
more recent testing to determine if the student had made progress. Baseline data was initially collected at the beginning of the research, in November 2014, and progress data was completed in February 2015.

2015-2016 Participants/Methodology. There were 31 children enrolled in this school year between two sections, one in the morning one in the afternoon. P3 students consist of five boys and six girls, totaling 11 children; P4’s had 15 boys and five girls. Each session lasted two and a half hours. Of the 31 students, 23 were deemed to be low income as set by federal guidelines, 74 percent of the children in the room. Eight were diagnosed with a developmental delay and one with a hearing impairment.

Students received a more embedded instruction during this school year where letters were introduced on a weekly basis then taught in contextual activities to enhance engagement and learning through everyday activities, routines, and/or transitions. Letters were taught in the order that they fall in the alphabet. There would be a specific letter hidden somewhere in the room and they were instructed to find it during center play or hidden in sand and they were supposed to dig that letter out for a prize. Except for that first day where the letter was held up, the teacher stated this is letter “F”, for example, “F” says FFFF, and students were taught the hand motion connected to the sound. There was no direct mention during whole group learning again.

Baseline data was collected in November of 2015 and completed in February of 2016. Children were presented with a piece of paper with 26 upper and 26 lower case letters in random order. Children were asked to name the letters and state their sounds. As before, the teacher researcher notated on the page letters children stated correctly and those in error. The data was then compared from November and February to determine effectiveness of instruction.
There was not a letter of the week that was focused on all week. A new letter was introduced once the previous letter was mastered. If students demonstrated they knew a letter after two days, a new letter was introduced. Likewise, if students were not showing retention of a letter after a week of exposure, that letter continued to be the focus of instruction until it was mastered. The teacher researcher followed methodologies within the parameters of The Enhanced Alphabet Knowledge Lesson Components (2012).

2016-2017 Participants/Methodology. There were 29 students enrolled in this school year between two sections, one in the morning one in the afternoon. P3 students in this school year consist of 13 boys and four girls. For a change, there were fewer P4 students enrolled, eight boys and four girls. Each session lasted two and a half hours. Of the 29 students, 19 were deemed to be low income as set by federal guidelines, 66 percent of students. Six have been diagnosed with a developmental delay.

Letters for this school year were prefaced in instruction with several weeks on what is sound. It was believed by several educators in the teacher researchers school that, because children did not appear to catch on to sound instruction as quickly as letter instruction, possibly they did not understand what sound was or its significance. Once instruction of the letters began, it was based on which sounds children are most able to produce first when learning to speak. A consulting speech and language pathologist provided information on which letter sounds are acquired and added to a child’s growing archive of sounds first and then progressed through on a weekly basis, a letter for each week. Letters were instructed with their corresponding sound and Jolly Phonics motion to assist in motor memory retention.

Students received direct instruction daily of the letter of the week and reviewed each letter previously taught. Direct instruction included being shown a flash card of the letter, lower
and uppercase, being told the letter name and sound by the teacher researcher, and each day of the week a brief discussion on the letter. For instance, Monday would consist of the introduction of the letter where children would trace the letter on a sandpaper copy that was passed around the carpet. The characteristics of the letter such as curved edges, straight/diagonal lines, or a cross at the top would be discussed and students were picked to build the letter using wooden pieces. On Tuesday, students would generate a list of words beginning with the letter of the week. Wednesday and Friday were for review of every previous letter taught. Thursday was for the review on characteristics of the letter.

Baseline data was collected in November of 2016 and completed in February of 2017. Children were presented with a piece of paper with 26 upper and 26 lower case letters in random order. Children were asked to name the letters and state their sounds. As before, the teacher researcher noted on the page letters children stated correctly and noted errors.

In previous years by the time data was taken in February, all letters had been introduced to students. This particular year implementation began later in the school year and each letter required a full week of instruction. If there was not a full week of school, a letter was not taught. Therefore, all 26 letters had not yet been taught. At the time of data collection 18 letters had been taught.

Results

The chi-square test is used to decipher whether the observed proportions in two or more categories differ significantly. This test is applied when working with nominal variables, specifically when values are categorical and cannot be numerically ranked. Samples must be selected at random from the population being examined and there is a minimum expectation of
five occurrences in each category (Glass & Hopkins, 1996; Pyrczak, 2010). This essentially tests for a growth correlation in the case of this research.

<table>
<thead>
<tr>
<th>School Year</th>
<th>Number of Students</th>
<th>Pearson Chi-Square Value</th>
<th>df</th>
<th>Significance</th>
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</thead>
<tbody>
<tr>
<td>2014-2015</td>
<td>27</td>
<td>41.158</td>
<td>30</td>
<td>.084</td>
</tr>
<tr>
<td>2015-2016</td>
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<td>51.944</td>
<td>35</td>
<td>.033</td>
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<tr>
<td>2016-2017</td>
<td>29</td>
<td>58.54</td>
<td>21</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 1. Statistically significant findings are shown during the 2016-2017 school year.

The year of instruction that was the most effective was the 2016-2017 school year. Since the smallest p value is the most significant, a value of .000 demonstrates the most substantial amount of growth when compared with the p values of 2014-2015 (.084) and 2015-2016 (.033).

**Discussion**

Any Early Childhood educator needs to keep in mind the growing changes and demands placed on young children in school. Developmentally appropriateness and learning ease are key in assisting a child’s ability to retain the letters while in preschool. While learning every letter by the time a child leaves preschool is not considered developmentally appropriate; it is appropriate to provide exposure, giving each child opportunity to learn at his/her own pace. Continued systematic exposure based on developmental milestones is supported in this research.

When reviewing the data collected over the three-year span, it is connections can be gleaned that the methodology presented using direct instruction to children with daily structured exposure to the letters was shown statistically more effective. The use of the Speech and Language Pathologist’s advice was useful and assisted children in acquiring the letters more quickly based on the manner they acquired the letter sounds from birth. More research could provide a connection to the work conducted by Justice & Kaderavek (2004) yielding that direct instruction is more effective in the achievement of phonological awareness during preschool for children who have language delays (Justice, & Kaderavek, 2004).
In connection to the research conducted by Botts, Losardo, Tillery, & Werts (2014), a large percentage of students in the class from the 2016-2017 school year were reportedly low income children. Growing up in low income environments could have resulted in the effectiveness of the direct instruction teaching method with this particular group of children.

**Limitations.** The 2014-2015 school year was the teacher researcher’s first year as a preschool teacher. Results could be limited due to the lack of teaching experience with children of this age and developmental state in a practical setting. Another limitation worth noting is whether parents worked with children at home. A factor that could have played a role in acquisition of letters but cannot accurately be measured is how much exposure children were given by parents. Also, not measurable is the quality of instruction posed by parents in the home. Parents can report the type of instruction provided and the quantity but parent self-reporting is not always reliable thus not always valid.

Additional notable limitations that could affect the data results are lack of teaching fidelity while instructing and documenting of the three methods, student absences, teacher absences, and/or prior knowledge due to previous preschool enrollment. Results are not generalizable because of sample size.

**Conclusion**

In conclusion, evidence supports that children retain letters when presented based on sound acquisition from birth as well as in a direct methodical way. The growth correlation from the 2016-2017 school year points to students responding best to an instruction that was based on developmental appropriateness and consistent weekly instruction. The amount of student growth found in the 2016-2017 school year could be accounted for when looking at the number of letters children have had the opportunity to learn thus far in the year. Students may not have had the ability to score lower because they had not yet been exposed to more than 20 letters. The 20 that
have been taught are letters that tend to be the easiest to retain as pointed out by research conducted by Jones and Reutzel (2012), Heroman and Jones (2010), and Phillips, Piasta, Anthony, Lonigan and Francis (2012). A look at scores from the end of the school year, once all letters have been instructed, could yield that the direct instruction methodology could show even more effective. The teacher researcher also made sure that in her instruction, children did not have the letters forced upon them in a daily mundane lesson. Children could observe and absorb the letters in their own learning experiences that was guided by teacher-planned opportunities.
References


