Using GLAD Strategies to Aid Preschoolers with Developmental Delays and English Language Learners in Developing Alphabet Letter Identification Skills

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FACULTY APPROVAL

Using GLAD Strategies to Aid Preschoolers with Developmental Delays and English Language Learners in Developing Alphabet Letter Identification Skills

Approved for the Faculty

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ABSTRACT

The purpose of this project was to determine if Guided Language Acquisition Strategies were the most beneficial instructional methods to use in teaching alphabet letter identification skills. Two groups of preschool children with developmental delays were a part of this study and the majority of the students were second language learners. Both groups of children received instruction using best practice teaching methods. One group also received instruction using Guided Language Acquisition Device (GLAD) methods and principles. A pretest-posttest design was used. The results of the project did not support the position that preschoolers who received instruction using best practices and additional GLAD strategies were more proficient at alphabet letter identification than the group of students who did not receive the two types of instruction.

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CHAPTER 1

Introduction

Background for the Project

The skills that children are expected to possess as they enter kindergarten have increased, along with the instructional expectations of teachers. Like all areas of education, early childhood special education is responsible for documenting student progress and learning. Education for students with disabilities and an increase in the methods used for identifying these students has intensified. Since the 2004 amendments to the Individuals with Disabilities Education Act (IDEA), teachers have greater accountability for establishing goals and assessing progress while educating students. In addition, the federal government also requires that teachers be highly qualified because of the importance of early childhood education. Special education teachers need to exhibit the knowledge and ability to identify and assess children with learning disabilities.

Early childhood education has been directly tied to positive later academic outcomes, especially in the areas of literacy, specifically vocabulary and reading. The instruction and the experiences that a child receives early on, promote "stronger student academic outcomes, especially for children at risk for academic underachievement" (Campbell, Pungello, Miller-Johnson, Burchinal, & Ramey 2001, p. 235).

At-risk children may have disabilities, developmental delays, live in poverty, or be second language learners. Any of these factors may put them at an academic disadvantage right from the start. This information is significant, since "…in the U.S., fully one third of children fail to read at basic levels by fourth grade" (National Assessment of Educational Progress, 2004, p. 452). "Young children who have a good comprehension of alphabet knowledge and letter identification later demonstrate better reading skills than those children who are unable to name most letters by sight" (Torppa, Poikkeus, Laakso, Eklund, & Lyytinen, as cited in Piasta, Purpura, & Wagner, 2010, p. 607). The ability to name alphabet letters and their sounds "is . . . one of the strongest longitudinal predictors of future reading success in young children" (Adams, as cited in McBride-Chang, 1999, p. 285).

Instruction of these important literacy competencies can take place using a variety of teaching methods. Through the use of Guided Language Acquisition Design (GLAD) teaching strategies . . . "teachers guide students to connect what they have learned to new situations and to the real world" (Guillaume as cited in Hansen, 2006, p. 25). They are then able to construct a deeper understanding of information as it relates to them and their own lives.

The methods of the GLAD model . . . "include speaking clearly and at a slower pace; using gestures and facial expressions; using concrete materials and visuals; avoiding idiomatic expressions; and using student centered activities"

(Krashen, as cited by Hansen, 2006, p. 23). Activities that are culturally relevant to the students' lives make it easier to generalize their knowledge over different situations. The ability to understand and apply new concepts to students' own lives helps to promote a stronger understanding. The strategies are appropriate not only for students learning a second language, …."also for mainstreamed and included students because the methods appeal to more than one learning modality and the multiple intelligences children possess" (Hansen, 2004, p. 39).

Statement of the Problem

Many preschool-age children affected by developmental delays and various disabilities are being identified as needing a preschool experience. The task of learning a second language increases the challenges facing educators to provide an appropriate education. Often, these students benefit from techniques with an emphasis on the use of hands-on visual activities. These tangible resources help students to scaffold their previous knowledge with their current learning. They are then able to utilize this knowledge and give it meaning by applying it to their daily lives.

Purpose of the Project

The purpose of this project was to determine the efficacy of best practice teaching strategies and GLAD strategies. These two instructional methods were used to teach alphabet identification skills to preschool students with developmental delays. Most of these students were also learning English as a

second language. It is anticipated that the empirical results obtained will indicate the importance of using best practice approaches along with GLAD strategies.

Delimitations

This research was conducted in a small school in Eastern Washington State. The school is located in a lower income, rural, agricultural area. This area has a high unemployment rate. The majority of the residents perform agricultural work or employment that is in some way related to the agricultural area. Many students are the children of migrant workers and often relocate within the state or move from one state to another because their family is following the agricultural work that is available.

There are six schools located in the School District; one high school, one middle school, one alternative school, and three elementary schools. 22.9 % of the enrolled students are transitional bilingual students). These students are in the process of acquiring and learning English language skills.

The school district devotes 66% of their money to instructional expenditures, 15% to central and building administration, and 19% to maintenance and operations, food services, and miscellaneous. (Office of the Superintendent of Public Instruction (OSPI) data, 2010). The total number of students enrolled in the district in 2010-2011 was over 3,300. The student population is 69% Hispanic, 24% American Indian, Caucasian, 4%, and 3% Asian.

At the school where this project was conducted, there were 21 certificated teachers employed in the elementary school, where the student-teacher ratio was 19:1. Of the district's total enrollment, 100% of students were eligible for free or reduced price lunch programs in 2010-2011. In comparison, Washington State had an average of 43.5% of students eligible for free or reduced price lunch programs. Eligibility for the National School Lunch Program is based on family income levels.

One elementary school served the preschool population of the entire district, comprising two general education preschool classrooms and three developmental special education preschool classrooms. The student-teacher ratio was approximately 8:1 in the special education preschool classroom where this project was conducted. In this classroom, 60% of the students were Hispanic and 40% were American Indian. Group A (morning class) had a total of four students. All four were English Language Learners. Group B (afternoon class) had seven students, two of which were English Language Learners. There were four male students and no females in Group A, and five male students and two females in Group B.

Eleven preschool students in two groups received instruction in identifying and naming alphabet letters. All of these students attended preschool four days a week for half of the day. Five other students who attended preschool

in this classroom either more or less than four hours weekly were excluded from this project.

Assumptions

The process of acquisition of a second language was difficult for these young children. Language and cognitive developmental delays made the learning activities very challenging for the preschool students. The methods implemented in this study were carefully chosen by the teacher to be appropriate for this group of students. The activities that were used were designed to promote an association between the students' home and life experiences and scaffold on the students' previous level of knowledge. Linking new learning with the student's prior knowledge helps them to construct meaning and remember the information more readily. It was assumed that both groups of preschool students gave their best effort in participating in classroom learning. The students were also assumed to be similar in ability in the areas of cognition, social, and emotional skills.

Hypothesis

The group of preschool children who receive instruction using GLAD strategies in addition to best practice strategies (Group B) will exhibit more progress on letter identification skills than the group of preschool children who receive only the best practice strategies (Group A).

Null Hypothesis

The group of preschool children who receive instruction using GLAD strategies in addition to best practice strategies (Group B) will not exhibit more progress on letter identification skills than the group of preschool children who receive only the best practice strategies (Group A).

Significance of the Project

The early acquisition of literacy skills has a direct correlation with later reading ability. Strategies that best benefit at-risk preschoolers in procuring these abilities are visual and concrete learning methods. It is anticipated that the GLAD strategies will be beneficial for helping all students, especially those who are learning a second language. If the GLAD strategies are effective at the preschool level, these methods will help to prepare students for the transition to kindergarten. If the results are positive, then teachers will be able to use GLAD strategies to promote learning in pre-academic areas while supporting students in their current language and culture. In addition, these strategies would assist in promoting a classroom sense of community and free up time for teachers to spend on other curriculum issues. The cost in dollars for implementing these strategies is minimal. This project could provide information to help teachers in planning their curriculum and the methods that they use to teach it.

Many of the students at this school are learning English as a second language, and need instructional methods that are designed for bilingual learners.

If the addition of GLAD strategies is proven to be advantageous for students, the methods could be integrated into the curriculum across various content areas. If the strategies are not effective, school districts and teachers could investigate research regarding other strategies that may be more beneficial.

Procedure

The author was required to obtain permission, shown as Appendix A, before performing this project. A letter explaining the intended project and the steps involved in implementation was presented to the school district superintendent. A meeting with the superintendent provided specific details of the project, and guidelines were put into place. Once permission was granted, the project was conducted using two groups of preschool children. Students attending preschool in the morning were members of Group A. Students in Group B attended afternoon preschool. A pretest was completed by each child in both groups to gather initial baseline data on their letter identification ability.

All preschool students participated in a variety of activities designed to enhance their learning of alphabet letter names. Students in both Group A and Group B were taught using "best practice" instructional methods proven to increase learning. The amount of time spent giving instruction using best practice strategies was one hour daily for Group A. Group B received one half-hour of instruction using best practice strategies and one half-hour of instruction using GLAD methods. All students were encouraged to compare and classify alphabet

letters, observe and discuss letters in their environment, and use physical movement, common interests and experiences to work cooperatively in their learning.

Group B, the group who received best practice instruction and GLAD teaching strategies, performed alphabet learning activities that included the use of patterning, visuals, graphics, real items, chants and rhymes, hands-on activities, and active participatory learning.

There were multiple opportunities for the students to perform these activities on a daily basis. The study continued for a period of eight weeks, four days a week. At the end of that time, a posttest was completed by each student in both groups to compare with the results of each student's pretest.

In Group A, students' ability level was measured after receiving instruction using best practice teaching methods. In Group B, student's abilities were measured after the students received instruction using best practice teaching methods with the addition of GLAD strategies. The results were obtained and the data was analyzed to determine the change in student progress. The amount of student progress was used to gage the efficacy of using both methods when teaching letter identification skills to preschool children with developmental delays and those learning English as a second language.

Definition of terms

Significant terms used in the context of this study have been defined

as follows:

best practice instruction. A technique or methodology that has been proven through experience and research to achieve the desired result.

GLAD strategies. Guided Language Acquisition Design instructional teaching methods that are specifically tailored to benefit students who are learning a second language.

individualized education program. A legal document that describes the student's current level of performance and the goals that the IEP team has set for the student to help him/her to be successful in school.

second language learner. Any language that is learned in addition to a person's first language.

t-test for independent samples. A parametric test of significance used to determine whether, at a selected probability level, the means of two independent samples are significantly different.

Acronyms

ELL(s). English Language Learner(s)

ESL. English as a Second Language

GLAD. Guided Language Acquisition Design

IDEA. Individuals with Disabilities Education Act

IEP. Individualized Educational Program

OSPI. Office of the Superintendent of Public Instruction

NAEYC. National Association for the Education of Young Children

CHAPTER 2

Review of Selected Literature

Introduction

This research project focused on literature that pertained to instructional strategies used to teach preschool students to learn and identify alphabet letters. The literature reviewed was selected from peer-reviewed journal articles and examined for relevance to the topic of teaching preschool students alphabet letters identification skills.

The literature reviewed focused on three areas: early childhood education for typical and at-risk children; Guided Language Acquisition Strategies (GLAD); and alphabet identification and literacy skills.

Early Childhood Education for Typical and At-Risk Students

Early childhood education for all children is essential in ensuring that students acquire the necessary skills to profit from early intervention. Students attending preschool have the benefit of being assessed and monitored by a teacher who is knowledgeable in developmental milestones. Students with special needs are often identified before the age of four, at a time when specialized instruction is the most beneficial for them (A Science-Based framework, 2007). Research shows that intervention at the preschool level yields . . . "short-term and long-term social and cognitive gains for students who may experience academic

underachievement because of poverty, disabilities, and other risk factors" (McDonald Connor, Morrison, & Slominski, 2006).

"Information pertaining to the advances in the science of early childhood and early brain development provide a framework for the processes by which brains are constructed in young children" (A Science-Based Framework, 2007). Additionally, "early experiences during the preschool years have an important influence on producing a weak or sturdy foundation for future development".

> While educators have known intuitively that the brain's structure and function play a critical role in the capacity to learn, the flow of new research findings over the last decade has provided new insights — often contradicting widespread assumptions about children and learning ("A Science-Based Framework", 2007, p. 8).

Initial views regarding brain development assumed that children were born with a certain amount of intelligence, which did not increase as the child grew. However, children are not born with a fixed intelligence.
Rather, at the time of birth, the brain and central nervous system are only partly "hard-wired." The child's experiences — having someone talk to, sing to, read to or play with him or her — significantly influence development of the brain and nervous system connections that define the ability to learn ("A Science-Based Framework", 2007, p. 12).

An environment that contains encouraging and receptive caregivers helps a child to build language and cognitive skills required for learning. Family and community associations coupled with early learning experiences build a structure for developmental growth and academic ability. For these reasons, an organized and well-defined program of early child education and intervention is essential for all children, especially those children who are at risk.

Many important developmental behaviors take place between the ages of three and five years. Social behaviors are becoming more complex, emotional capacities and skills in problem-solving are increasing, and pre-literacy skills are forming the building blocks for language.

> By the ages of four and five, most children have learned the basics of the grammatical system in their language, can detect and identify simple emotions in themselves and others, begin to understand other people's points of view, experience emotions that are important to the development of conscience (e.g., shame and guilt), have learned the rudiments of how to negotiate with others to achieve common goals, and can sit quietly with a group of children and pay attention for at least brief periods of time ("A Science-Based Framework", 2007, p. 7).

Children from families who are at-risk due to poor socioeconomic factors have significantly less language and pre-academic skills. These "…substantial

gaps in cognitive and academic competencies persist in later school years", (Magnusun, Meyers, Ruhm, & Waldfogel, 2004, p. 117).

Quality early childhood experiences are especially important for children who are at-risk. "Families facing economic constraints are limited in the quality and types of learning experiences they can provide for their children". "Close to 40% of the associations between economic disadvantage and young children's lower academic performance are explained by the lower quality of home learning environments" (Smith, Brooks-Gunn, & Klebanov, as cited by Magnusun, Meyers, Ruhm, & Waldfogel, 2004).

According to "A Science-Based Framework" (2007), many factors that have a direct influence on child development include:

- Access to basic medical care for pregnant women and children which helps to prevent threats to healthy development as well as provide early diagnosis and appropriate management when problems emerge.
- For vulnerable families who are expecting a first child, early and intensive support by skilled home visitors can produce significant benefits for both the child and parents.
- For young children from low-income families, participation in very high-quality, center based, early education programs has been demonstrated to enhance child cognitive and social development.

- For young children from families experiencing significant adversity, two-generation programs that simultaneously provide direct support for parents and high-quality, center-based care and education for the children can have positive impacts on both.
- For young children experiencing toxic stress from recurrent child abuse or neglect, severe maternal depression, parental substance abuse, or family violence, interventions that provide intensive services matched to the problems they are designed to address can prevent the disruption of brain architecture and promote better developmental outcomes for the child.
- For families living under the poverty level, work-based income supplements for working parents have been demonstrated to boost the achievement of some young children.
- Environmental policies that reduce the level of neurotoxins in the environment will protect fetuses and young children from exposure to substances that are known to damage their developing brains.
- No single program approach or mode of service delivery has been shown to be a magic bullet.
- "Scaling up" successful model interventions into effective, multi-site programs is a formidable challenge that can be addressed, at least in part, by establishing quality standards and monitoring service delivery on a routine basis (p. 4-5).

These findings suggest the importance of focusing on early childhood and special education in the hope of identifying and addressing learning problems early. The developmental process that takes place rapidly within the first five years of life includes a vast amount of critical developmental milestones.

Guided Language Acquisition Design Strategies.

The Guided Language Acquisition Device (GLAD) Project was developed by educators in California about twenty-seven years ago as a consequence of English as a Second Language (ESL) curriculum that was inadequate, at best. Since that time, there have been numerous updates, changes, and revisions in response to new research. The United States Department of Education and the Office of Bilingual Education and Minority Language Affairs bestowed a Project of Academic Excellence award on the GLAD Project in its early stages. Training of teachers in these research-based instructional strategies in all areas of the United States is a priority.

Guided Language Acquisition Design is a research-based instructional model developed to assist in teaching ELLs. Through the use of GLAD strategies, teachers provide support to students that are still developing language and literacy. "These students utilize methods that help them access content and language even though they may not speak enough English or have enough literacy to participate" (Bhatt, as cited by Brechtel, 2006). "These strategies have worked

with students in urban, suburban, and rural settings, with special needs student of all types, and the "typical" students throughout the nation" (Brechtel, 2001, p.1).

According to Hansen (2006), "One popular version of the learning cycle consists of four stages: engage, explore, develop, and apply". In the engage phase, educators demonstrate a concept to be learned, usually built around a topic or theme. An object relating to the concept is shown to the children, and discussion takes place as students look at and think about the object.

Within the engage phase, strategies used by the teacher include: "Speaking clearly and at a slower pace; using gestures and facial expressions; using concrete materials and visuals; avoiding idiomatic expressions; and using student-centered activities" (Krashen, as cited by Hansen, 2006, p. 23). As students are learning the alphabet, hands-on activities should be provided in multiple sensory modalities to reach children and their individual learning style. Children could touch and manipulate alphabet letters made of different materials such as play dough, wood, sandpaper, or sponge. Tracing alphabet letters and manipulating magnetic letters are other hands-on ideas.

Another method within the engage phase is the use of language buddies. This is the pairing of students who are ELLs with students who fluently speak the student's native language. Buddies can help with explanation and clarification and provide translation as needed. Drawing pictures and writing or copying simple words in English to describe ideas is another activity that can be done in a

buddy group. Students could build their name using magnetic alphabet letters, stickers, or glue and textured materials. According to Hansen (2006), "When teachers allow children to communicate at their own level, they are giving children a voice and an opportunity to share what they know" (p. 24).

During the explore phase, ELLs work alongside their peers who speak English fluently. These peer groups participate in inquiry-based activities that get them actively involved, increasing the level of learning. Each student offers their version of the activity through the drawing and labeling of their pictures. Teachers assist with this task by recording ideas on classroom charts.

The develop stage incorporates the teaching of new concepts with new vocabulary words to describe them. It is essential to intersperse brief individual instructional periods with the instruction done in peer groupings. This individual time "helps lower anxiety in the group and ensures that English-speaking students will not dominate the conversation, and the English language learners will be more apt to participate" (Hansen, 2006, p. 24).

Songs, poems and chants are a significant part of the GLAD instructional procedure. These rhythmic verses can be incorporated into the language and academic learning process, improving retention of information. "Repetitive phrases help children to remember the academic language through actions, gestures, music and rhymes" (Ruark, 2011, p.1). These verses were written on

charts, which were posted on the walls of the classroom, providing repetition of learning and reinforcements of important concepts.

Contents of the teacher's lectures are chunked into segments, with time allowances for processing the information. During this processing time, children discuss with their classroom neighbors the topic information and additional explanations. The lecture segments for preschool and kindergarten children are 4-5 minutes of lecture, with 1-2 minutes of processing time. This processing time "allows for comprehensible output, negotiation of meaning, and a risk-free environment…"Brechtel (2001). This environment gives children the chance to try out new words with peers, and provides an opportunity for all students to speak, building on their language skills.

Alphabet Identification and Literacy Skills

The early acquisition of literacy skills in preschool aged children has a direct correlation with later reading ability. Learning to identify alphabet letters before kindergarten has been linked with higher skills in reading and literacy skills at a later age. Alphabet letter naming and phonological knowledge in children ages 3-5 has also been shown to predict children's ability to read at grade level.

For these reasons, the National Association for the Education of Young Children (NAEYC) views the learning of the alphabet as a significant goal for preschool children. In addition, "phoneme manipulation was closely associated

with letter knowledge and with letter sound knowledge" (Mann & Foy, 2003, p. 134). "Knowledge about letters—their shapes, their names, and their linguistic functions—plays an important role in the development of reading and spelling ability" (Mann & Foy, 2003, p. 194).

In order to recognize letters, children need to look at different parts of the alphabet letter. According to Bradley and Jones, (2007), "Children must understand key visual features such as letter shape, orientation, and directionality" (p. 452). These authors go on to state "In addition to discerning key features, children must learn to recognize those features in letters presented in various sizes, fonts, cases, and handwriting styles" (p. 452).

The ability to learn the names of alphabet letters hinges on other important knowledge. Children must learn to see each letter as a symbol with its own individual name. Most of the time, children are first taught to recognize uppercase, or capitol letters. After mastering the capitol letters, children begin to learn about the corresponding lowercase letters. Many of the capitol letters are very similar in shape to their corresponding lowercase letter.

Treiman and Broderick, (as cited by Bradley & Jones, 2007), "found that children are able to learn all letter names equally well, although they tend to learn the first letter of their names more easily than the other letters of the alphabet", (p. 453). Children have a tendency to learn the first letter of their name because it is

very special to them. They are also exposed to the letters of their name much more often than other letters.

Speech development and knowledge of alphabet letters relate to speech production in ways that are not yet fully understood. What is known is that both speech perception and speech production are both lacking in students who are struggling readers. Insufficient skills in letter identification are associated with difficulty reading and weak phonological skills. Low vocabulary skills are often part of struggling reader's problems. This may explain the connection between speech skills and reading.

In tests completed with preschoolers and kindergartners, the alphabet name task was one area where children performed well. Testing that was done to assess children on their ability to identify the sounds of the alphabet letters showed significantly lower average scores than letter naming ability. "In the U.S. and Canada, as in a number of other countries, children are often exposed to letter names informally at home and at preschool" (Treiman, Pennington, Shriberg, & Boada, 2008, p. 1323).

Letter knowledge is usually assessed by showing the child a letter and asking them to name it. Often, children are tested on their letter sound knowledge at the same time that they are being assessed in letter naming skills. "Supporting the idea that letter knowledge is important in learning to read and spell, young children's knowledge as pooled across letters or across names and sounds predicts

their later literacy skills" (McBride-Chang & Riley, as cited in Treiman et al. 2008.)

Preschool and kindergarten children who do not have a strong knowledge of letter names and sounds go on to have difficulty learning to read and are sometimes labeled as having a learning disability. "These children tend to fall further behind their peers in reading acquisition, leading to gaps in spelling, reading fluency, vocabulary, and comprehension skills" (Stanovich & Torgesen, as cited by Piasta, Purpura & Wagner, 2010, p. 8).

The way that children learn letter-sound correspondence may be related to the development of later reading problems. It is suspected that students who go on to develop reading problems look at print in a different way than typical children. They may use skills in rote memorization, rather than looking at print in a systematic and methodical approach. "If a tendency toward rote memorization characterizes these children's early learning of letter sounds, as their later reading, then children who develop reading disabilities should not use their knowledge of letter names and their phonological awareness to learn letter sounds" (Treiman, et al. 2008, p. 1328).

Summary

Early education for young children is imperative if they are to enter kindergarten with the needed pre-academic readiness skills, such as alphabet letter identification. Students who are at-risk have an even greater need for early

schooling, due to family issues and socioeconomic conditions. Children who are ELLs have an extra hurdle to overcome as they learn a second language while grasping important concepts being taught in the classroom. Through the use of GLAD instructional strategies, children are better able to build their academic skills while expanding their language abilities.

CHAPTER 3

Methodology and Treatment of Data

Introduction

Kindergarten students are expected to begin their school year with an understanding of basic pre-academic concepts. The preschool years are the time when children are learning these new skills. Children with developmental delays may need instruction using individually tailored methods. At the same time as these concepts are being mastered, many children are also learning a language different from the one spoken at home. The GLAD method utilizes tangible objects, pictures, chants, songs and rhymes to aid students in learning academic concepts while acquiring language proficiencies. This approach is particularly successful for ELLs, as well as students with special needs. It is important to determine the most effective strategies for teaching alphabet identification skills to preschool children.

Methodology

This project was conducted to determine whether best practice strategies or a combination of GLAD and best practice strategies were most effective when teaching alphabet letter identification to preschoolers. The project was accomplished by employing two groups of preschool children with a pretest-posttest group design.

Participants

This study was conducted in a developmental special education preschool classroom over an eight-week period between September and November 2011. Eleven preschool students in two groups received instruction in identifying and pointing out alphabet letters as each letter was said aloud. Each of the students attended preschool four days a week for half of the day. All of the children were four years of age.

The 11 students were divided into two groups, with Group A students attending preschool in the morning, and Group B students attending the afternoon session of preschool. Students had previously been randomly placed into either the morning or afternoon preschool timeslot. The population of Group A consisted of 4 boys. Group B contained 5 boys, and two girls. Five other students who attended preschool more or less often than this group were excluded from the study. Of the eleven preschool children participating in this study, six of the students were Hispanic, and five students were American Indian. Four children in Group A were learning English as a second language, while two students in Group B were ELLs.

Instruments

A data collection form designed by the author was used to record the results of the pretest and posttest. This data form measured the number of alphabet letters each student was able to correctly identify. The pretest was given

to acquire baseline data and assess the students' alphabet letter identification skills. The same test was given as a posttest to gather information on ability after the students received eight weeks of instruction. These results were then analyzed statistically using a *t*-test for independent samples. The data form is included in Appendix B.

Design

The design used in this project was the two group pretest-posttest design. Both groups of preschool children were given a pretest before receiving any educational instruction. This information established a baseline for each student.

The students were then exposed to eight weeks of instruction using best practice strategies for Group A, and a combination of best practice and GLAD strategies for Group B. Both groups received one hour of total instruction daily. At the end of this time, each child was given a posttest. The posttest results were used as a comparison to measure progress. It was anticipated that the empirical results obtained would indicate the importance of using best practice approaches along with GLAD strategies in teaching alphabet letter identification to preschool-age children.

Procedure

Permission to conduct this research project was secured from the principal of the elementary school and the superintendent of the school district. Information

regarding the purpose of the project and the procedures that were implemented were discussed beforehand with the superintendent.

The project was conducted by having individual students seated at a table facing the teacher. A chart containing all of the capital letters of the alphabet, listed randomly, was placed on the table in front of the child. The student was instructed to listen carefully as the author spoke out loud a letter between A and Z. Students were requested to locate and point to the letter on the chart in front of them. If needed, the letter was repeated verbally.

Since most of the students have language delays, the responses were not verbal. Each child was directed to use his/her finger to point to the capital alphabet letter that had been named, on the alphabet chart. Using a stopwatch, ten seconds was given for a response. If a student answered incorrectly or took more time than allowed, they were informed of the correct letter and the response was counted as a miss. As the test was being conducted, the author marked each student response as a "yes" or "no" next to the alphabet letter they were asked to identify. This data was recorded for each student onto the pretest data sheet. After the baseline for each student was established on the pretest, educational instruction was given for an eight week period.

Both Group A and Group B students participated in a variety of educational activities and received instruction using best practice strategies and methods that were designed to enhance their skills in letter identification. Group

A received these methods for one hour each day, while Group B received these methods for one-half hour, and GLAD instructional strategies for the other half-hour. Total instruction for both groups was one hour daily, four days a week.

The best practice teaching involved some direct instruction showing alphabet cards and discussing the name of each letter and its beginning phonetic sound. Students examined the alphabet letter cards, first tracing them with their finger and then attempting to write them on paper. Letter similarities and differences were discussed (shapes, lines, tails); children were asked for their observations and then they were recorded on paper with two columns marked "same" and "different". Many of the alphabet letters were incorporated into anime-type animals and characters, to make the learning more fun and to improve retention. This provided the students with a visual and linguistic form, proven to stimulate and increase brain activity. Both groups of students practiced writing their name daily in a journal, as well as learning to write a different letter each week. Students were rewarded for effort with tangible items such as stickers or motivational ink stamps on their journal page. In addition, non-tangible reinforcement in the form of encouragement and praise were given to students.

Hands-on activities were provided in multiple sensory modalities as part of the best practice instruction to assist the children in learning through their individual learning style(s). Children manipulated alphabet letters made of varying materials and textures such as play dough, wood, sandpaper, or sponge.

Students traced the alphabet letters using transparent alphabet templates. Other activities centered on the manipulation of magnetic letters on a metal cookie sheet, and putting together alphabet puzzles.

Group B received half of their instructional time through the use of GLAD strategies in learning to identify alphabet letters. Some of these activities included an observation chart where the teacher drew mini posters with pictures of each individual capital letter. Pictures of items that start with that same letter were then added to the poster to reinforce learning. After viewing and discussing the posters, they were strategically placed in four areas around the room. This extra exposure to the letters gave students an additional opportunity to explore the letters. Students practiced writing the letters or writing words and drawing the pictures from the posters.

Another resource that was used was a large, teacher-made alphabet book. Students were guided in their learning by viewing the letter and a corresponding picture that starts with that letter, and repeating after the teacher. An example of the dialogue used with the students is; "A is the first letter of the alphabet, apple starts with A. Remember, A is the first letter of the alphabet. Next page—A is the first letter of the alphabet—alligator starts with A. Remember, A is the first letter of the alphabet. The letter B says buh, buh, buh. Ball starts with B. Remember, the letter B says buh, buh, buh".

A pictorial input chart was used as an effective tool in introducing letters of the alphabet to the students. The teacher used a pencil to lightly draw alphabet letters and corresponding pictures beforehand on a piece of large white paper. This poster was then hung on the wall, where students watched as colored markers were used to trace the pencil lines, making the information come to life and reinforcing the alphabet letters. Chants with lots of rhyme and repetition were used as a fun and beneficial activity in helping students to remember the alphabet letters. In the same way that a catchy tune can get stuck in your head and you find yourself singing it hours later, chants and rhymes are fun to sing and provide another opportunity for students to reinforce their learning.

One of the most popular and effective classroom management GLAD strategies was choosing a student(s) to act as a "scout" to observe their peer's behavior as the teacher was giving direct instruction. "Scouts" were chosen before instruction began, and were provided with incentives to give out to good listeners. Students were told that if they were respectful, listened carefully, and solved their own problems, they may receive a prize from the scout(s). The 'prizes' were stickers or small pictures cut from magazines. Sometimes, these pictures were laminated onto a piece of construction paper to make a bookmark. This method encouraged students to be aware of their own behavior and to develop greater self-control.

Group B, the group of students who received both varieties of instruction, were sometimes paired up with another student during GLAD instructional time. A student who spoke English more fluently was paired with a second language learner. Through these pairings, students helped each other with translation of words and clarification of concepts when needed. Students also drew pictures and copied simple letters and words in English. Other activities that the students participated in were building their name or other short words using magnetic alphabet letters, stickers, or glue and textured materials. These small cooperative peer groups helped to lower anxiety and encouraged all of the students' participation in learning activities.

Songs, poems and chants were a substantial part of the GLAD instructional procedures. The students enjoyed singing songs about the alphabet and dancing or making body movements while chanting rhythmic verses. These movement activities have been shown to reinforce the learning and improve retention of information.

All of the students received instruction and participated in letter identification activities for one hour daily. All eleven of the students attended school four half days a week. The total hours of instruction for these 11 students were four hours weekly. Group A received one hour of best practice strategies, while group B received one-half hour of best practice strategies, and one-half hour of GLAD strategies.

Two students who attended preschool four full days a week and three other students who attended two half-days per week participated in the project but their results were excluded from the study data for validity. This research project was conducted on a daily basis four days a week, for an eight-week period.

After eight weeks of instruction and activities, the same data form used for the pretest was utilized to record the level of results on the posttest. The posttest was administered in the exact manner as the earlier pretest was given. The data results were then analyzed through the use of a *t*-test for independent samples.

Treatment of the Data

The results of this research project were obtained by analyzing the data using a *t*-test for independent samples. The *t*-test that was used to examine the data was part of an online program utilizing statistical tests. The data results from the *t*-test provided an analysis of student progress for each student.

Summary

This research project was conducted to determine which methods would be most successful in teaching alphabet identification skills to preschool students. Eleven students were divided into two groups. A pretest was given to each individual student to measure the current knowledge level. Both preschool groups received instruction using best practice methods. Group B received half of their instruction using best practice strategies and half of their instruction using GLAD strategies. The total instructional time for both groups was one hour per day. At

the end of eight weeks, students were given a posttest to assess their progress in identifying letters of the alphabet. The information was statistically analyzed by using a *t*-test for independent samples.

CHAPTER 4

Analysis of the Data

Introduction

Research shows a strong correlation between phonological knowledge and the ability to name alphabet letters and young children's later ability to read at grade level. This research project was conducted to identify an instructional method which is most successful in teaching alphabet letter identification to preschoolers. The researcher used best practice teaching strategies and GLAD strategies to assist students in learning to identify alphabet letters.

Description of the Environment

This research project was conducted in a developmental special education preschool classroom located in Eastern Washington State. Eleven four year-old preschool students were divided into two groups according to the time of day in which they attended preschool. The majority of the students were second language learners.

Group A received instruction in alphabet letter identification using best practice instructional methods for one hour per day. Group B was instructed using best practice strategies for one-half hour daily and GLAD strategies for one-half hour. Both Group A and Group B received a total of one hour of daily instruction. All of the students received four hours of instruction weekly. Instruction continued for eight weeks, four days a week. The students were given

a posttest in alphabet identification, which was compared with the results of a pretest given at the beginning of the eight-week period.

Hypothesis

The group of preschool children who receive instruction using GLAD strategies in addition to best practice strategies will exhibit more progress on letter identification skills than the group of preschool children who receive instruction using only the best practice strategies.

Null Hypothesis

The group of preschool children who receive instruction using GLAD strategies in addition to best practice strategies will not exhibit more progress on letter identification skills than the group of preschool children who receive instruction using only the best practice strategies.

Results of the Study

The results of this research project were analyzed using the *t*-test for independent samples. A *t*-value of 1.15 with 7 degrees of freedom was obtained for Group A, the students who received instruction using only best practice strategies. The results for Group B, the students who received both best practice and GLAD strategies, showed a *t*-value of 1.46 with 8 degrees of freedom. Neither of the *t*-value scores was significant at the .05 level, as illustrated in Table 1.

These results do not support the hypothesis: the group of preschool children who received instruction using GLAD strategies in addition to best practice strategies

will exhibit more progress on letter identification skills than the group of preschool children who received instruction using only the best practice strategies. Based on the information, the hypothesis, the group of preschool children who received instruction using GLAD strategies in addition to best practice strategies will exhibit more progress on letter identification skills than the group of preschool children who received instruction using only the best practice strategies, was rejected, and the null hypothesis was supported.

Analysis of the results data were obtained by computing the numbers through a *t*-test for independent samples. These results are demonstrated in Table 1.

Table 1: T-values for Group A (best practice instruction only) and Group B (best practice instruction and GLAD instructional strategies)

GROUP	*t*-value	DF	Significant at .05
A	1.15	7	No
B	1.46	8	No

The results of the pretest and posttest for each student and the amount of change in the number of alphabet letters identified are shown in Table 2. While neither of these scores was significant at the .05 level, Group B showed a greater amount of progress in the number of students who were able to identify alphabet letters.

Table 2: Summary of scores in students' letter identification ability

GROUP/STUDENT	PRETEST	POSTTEST	CHANGE
GROUP A #1	2	5	+2
GROUP A #2	6	8	+2
GROUP A #3	1	4	+3
GROUP A #4	0	1	+1
GROUP A #5	1	4	+3
GROUP B #1	6	17	+11
GROUP B #2	0	0	+0
GROUP B #3	12	18	+6
GROUP B #4	3	6	+3
GROUP B #5	1	4	+3
GROUP B #6	1	5	+4

Findings

The results from this comparative research project were computed using the *t*-test for independent samples. Statistics obtained from the *t*-test for independent samples indicated that the null hypothesis was supported: the group of preschool children who receive instruction using GLAD strategies in addition to best practice strategies will not exhibit more progress on letter identification

skills than the group of preschool children who receive instruction using only the best practice strategies.

Discussion

Analysis of this project showed that there were positive results of the study, however they were not significant at the .05 level. The results did show an increase of both groups in the number of alphabet letters that the students were able to identify. After receiving instruction over an eight-week period, five students in Group A showed a total increase of 11 more alphabet letters identified. Group B, which contained six students, showed a total increase of 27 additional alphabet letters identified.

This enhanced skill level did indicate that the design would be beneficial on some level. Further research would demonstrate which aspects of the project were most advantageous to students' learning. These particular aspects could be identified, and then perfected to give greater results.

The pretest/posttest results demonstrate a change in students' letter identification abilities. This design did contain factors that were outside the control of the researcher. An outside factor that was beyond the control of the author was the ability to directly attribute changes in letter identification ability to the instruction given. The results of the posttest could not be definitely attributed to the instruction that the student received at the preschool.

Another factor may have been the anxiety level of students who felt that they had scored poorly on the pretest at the beginning of the year. After eight weeks of instruction, students may have had a greater level of confidence in their abilities towards the end of the project, and so may have scored higher on the posttest.

The students in this study all had developmental disabilities of varying levels. Two students were unable to identify any alphabet letters either before or after the instruction. Other students had a gain of only one letter identified.

Summary

The sample population of students in this study was small, especially after the exclusion of five students to maintain the validity of the project. The students excluded from the study attended preschool more or less than four half-days a week, which would have caused issues with the validity of the study. The null hypothesis, the group of preschool children who receive instruction using GLAD strategies in addition to best practice strategies will not exhibit more progress on letter identification skills than the group of preschool children who receive instruction using only the best practice strategies, was supported. The data from the pretest/posttest did show gains in students' ability to identify alphabet letters in both Group A and Group B. However, it was not statistically significant at the .05 level after further analysis using the *t*-test for independent groups.

CHAPTER 5

Summary, Conclusions and Recommendations

Introduction

This study was conducted to determine the most beneficial and effective instructional strategies to use in teaching students with developmental delays and disabilities. Specifically, the study compared the progress of students' ability to identify alphabet letters. Preschool students were randomly placed into two groups. Each group of preschool students received differing instruction. The students in Group A received one hour of daily instruction using best practice methods. Group B students also received one hour of instruction daily, however their instruction consisted of a combination of best practice methods and GLAD strategies.

Summary

Quality early childhood education is linked to positive academic outcomes later in education. This connection is especially true in the areas of literacy, especially vocabulary and reading. Students who are ELL's have an extra hurdle to overcome in the area of literacy.

This project focused on instructional strategies used to teach preschool students alphabet letter identification skills. Children with disabilities and developmental delays can especially benefit from individually tailored instruction.

This project was chosen because the author taught in the developmental preschool classroom and was motivated to determine the most effective instructional strategies. Progress data from students before and after instruction is reported in this study.

Research-based literature was chosen and incorporated into the project in order to address and include three separate, yet interrelated areas. The literature that was reviewed focused on three areas: early childhood education for typical and at-risk children; GLAD strategies; and alphabet identification and literacy skills. These topics related to the students and the topic of alphabet identification strategies.

The project used the pretest-posttest group design. Students were given the pretest in order to establish a skill level baseline. After eight weeks of instructional methods and strategies, students were given the posttest to measure progress and achievement of alphabet letter identification.

Conclusion

Results showed an increase in the skill level of the students, however the increase was small. After analysis using a *t*-test, the results were not shown to be significant at the .05 level. The hypothesis was rejected due to a lack of statistical significance. Group B, the group of students who received both best practice and GLAD instructional strategies, did show a higher level of progress than the group who only received best practice instruction.

Recommendations

Further research with a larger group of students would be valuable in determining the level of improvement for each student using both of the instructional strategies. Additional research results would assist in providing reliable instructional recommendations to educators. Teachers should always be aware of the variety of learning styles, and establish the most effective styles for each student. The use of beneficial individual learning styles will allow each student to best receive and process information and concepts. These individual learning styles are especially important to pinpoint in using the most advantageous instructional strategies for disabled and developmentally delayed students. The use of multiple teaching strategies help to ensure that all students are learning and achieving in the way in which each learns best.

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APPENDIX A: Permission

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Becky Imler, Superintendent

MEMO

To: Kathleen Karle

From: Becky Imler, Superintendent

Re: Research Project

Date: September 19, 2011

Cc: Dan Murray, Ric Pilgrim, Glenn Green, Kelly Garza, Shannon Torres, Edmund Wong

As per our discussion, your request to complete a research project in the WELCOME preschool has been approved. This is an approximately eight week study comparing the variable of GLAD within the instructional framework of your instruction. The variable will be delivered to one session and withheld from the other session.

As noted during our meeting, all aspects of this project are to be anonymous including name of the student, building, program and school district. A copy of this research document will be on file at Heritage College both in printed and CD versions. No copy of any aspect of this project can be utilized on the internet, including social networking and video sites. A copy of the final research document will be provided to the superintendent. No student will be denied quality instruction nor will this project impact any IEP programs.

Best wishes for the successful completion of your Masters Program. I appreciated your time in meeting.

APPENDIX B: Pretest-Posttest

Pretest/Posttest Data PRETEST---SEPT. 17, 2011

POSTTEST--- NOV. 17,2011

Student # _____ Group #_____

LETTER	PRETEST	POSTTEST		LETTER	PRETEST	POSTTEST
A	Y N	Y N		N	Y N	Y N
B	Y N	Y N		O	Y N	Y N
C	Y N	Y N		P	Y N	Y N
D	Y N	Y N		Q	Y N	Y N
E	Y N	Y N		R	Y N	Y N
F	Y N	Y N		S	Y N	Y N
G	Y N	Y N		T	Y N	Y N
H	Y N	Y N		U	Y N	Y N
I	Y N	Y N		V	Y N	Y N
J	Y N	Y N		W	Y N	Y N
K	Y N	Y N		X	Y N	Y N
L	Y N	Y N		Y	Y N	Y N
M	Y N	Y N		Z	Y N	Y N

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