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Improving Vocabulary Comprehension for Deaf or Hard of Hearing Students

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Improving Vocabulary Comprehension for Deaf or Hard of Hearing Students

Research Paper

Submitted to Special Education Faculty of Marshall University College of Education and

Professional Development in Partial Fulfillment of the Requirements for the Degree

Masters of Arts

By

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Abstract

The purpose of this study was to pursue the best ways to use visual representation as an introduction to vocabulary to a deaf or hard of hearing student. These techniques were effective for the student to be able to maintain comprehension. The teacher used either use sign language to demonstrate the sign for the vocabulary word or finger spell the vocabulary word, identified the written word, and said the word aloud in the study. The instrument used for the pretest and posttest were ten Dolch sight words: three, yellow, down, jump, help, run, funny, big, little and play. Documentation from the initial pretest was collected. Showing the sight words on flash cards for four days and provided a picture along with sign language used for 4 days and documented the outcomes. The results showed significant gains in Dolch sight word acquisition in favor of the flash card combined with picture and sign language.

Dedication

This dedication is to the ones that I left alone for hours and never had a warm supper on the table, for all the missed ball games, birthday parties, awards ceremonies, vacation time, and missed telling you good night, and the countless missed time of being together that we can never get back; I am truly sorry. I hope you all forgive me. I had a plan to make myself better, to be a more successful teacher and to be more beneficial to my students. I just never realized once I began this program, how much time away from those I love dearly it would be. I did not want to quit because I have taught you all to never quit. I am proud of my achievements but it was because of you, I drove myself to the limits and maxed out my human strength. Even though I missed all the above events, I am now a better person, you still love me and while you were always there in my shadows, you were the wind beneath my wings. Therefore, besides saying, "I am sorry for not being there", I want to say, "thank you and I love you" for you are the reason I have my Masters today!

Love, mom (Tammy)



* Also, a very special thank you to Molly Simonton, Dr. Lori Howard and Dr. Sue Hollandsworth. Thank you for guidance and support!

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Chapter One: Introduction

A student that develops vocabulary at a slower pace is less likely to perform on grade level. When this happens, it has occurred that these students get diagnoses to have a learning disability because of the poor performance on grade level vocabulary assessments. Teachers have to provide these students with effective review, re-teach, and reinforce the meaning of basic vocabulary. Another task is to decide which words are most important to teach first. In most situations, there is limited time to give direct vocabulary instruction (August, Carlo, Dressler, & Snow 2005).

Students that are deaf or hard of hearing are not at the age appropriate levels, as their peers educationally (Lederberg & Spencer 2001). They have smaller lexicons and learn new words at a slower rate. This will in turn, limit their vocabulary comprehension and their reading skills will be below standard scores. Moats (2000) said those deaf or hard of hearing students that lack vocabulary comprehension and literacy skills couldn't engage in classroom activities completely. Therefore, it is a constant struggle for these students, to maintain academically, at the same rate as their peers in an educational setting. Often times, these students that struggle are at a higher risk of high school dropout, get incarcerated, or just struggle to manage a satisfying life. This study will reveal the effectiveness of the use of visual representation to help build vocabulary for deaf or hard of hearing students.

Statement of the problem

Deaf or hard of hearing children are lacking exposure to sign language in early stages of life (Edwards, Figueras, Mellanby and Langdon 2010). This indicates they will likely be at risk of delayed language skills throughout their life. Staden (2013) shows in order for children to

prosper in both, reading skills and overall knowledge, their learning environment must be set up properly. A benefit could be by use of pictures and the written word throughout the classroom, having a vocabulary word area to review with the student daily, and by playing games that will help the student recall and retell previous vocabulary words as well as newly introduced vocabulary.

Purpose of the study

The purpose of this study was to pursue the best ways to use visual representation as an introduction to vocabulary to a deaf or hard of hearing student. These techniques will have to be effective for the student to be able to maintain comprehension. The teacher will either use sign language to demonstrate the sign for the vocabulary word or finger spell the vocabulary word, will identify the written word, and say the word aloud are incorporated in the study.

Rationale for the study

Severe hearing impairment students' often show delayed in vocabulary comprehension in the spoken language (Burger & Hoefnagel 2005). Jiang (2000) states that it is very important to determine why the deaf or hard of hearing can remember more spoken words when accompanied by the signed words. This method is used in vocabulary training and could set a standard as to how new vocabulary words are built into the mental lexicon. Finding ways for vocabulary words to help demonstrate language comprehension and language development is important to development of vocabulary. If a deaf or hard of hearing, student could make a connection between the visual representations in the sign language with the spoken vocabulary, it is possible, growth and development would be created. It would be useful to research the contribution of sign language use with the spoken vocabulary in more detail.

Vocabulary training is an important factor for students to be able to learn new vocabulary words after a certain amount of time of exposure. One word learning strategy developed is called rapid word learning. These students must have exposure, and a time to get familiar and to have a general idea of the vocabulary meaning (Lederberg, Prezbindowski & Spencer 2000).

Vocabulary, through read alouds, even though they are designed specifically for hearing children, can be designed for deaf or hard of hearing students as well. The teacher will have to make accommodations to make it most beneficial for the deaf or hard of hearing student. (Andrews 2012). Another helpful task could be for the teacher to add writing activities as well as drawing. The teacher can discover how well the deaf or hard of hearing student can comprehend by reading the story and then asking the student to make a drawing of what occurred in the story. The drawing and reading can connect the development of vocabulary words as well as understanding of the meaning of words. This will allow for connection of vocabulary to print.

Research Question

Does the use of visual representation help increase the comprehension of vocabulary with a first-grade deaf or hard of hearing student?

The participant for this research was a first-grade deaf or hard of hearing student. The independent variable for this research was a pre-test and a post-test of 10 Dolch words. These words were presented on flash cards. The word signed to the students. The meaning of the word signed and demonstrated at the time of the presentation of the word. The student was encouraged to sign the words also. A Bingo game introduced that was made of the targeted Dolch words as reinforcement to gain comprehension. The sign for the Bingo word presented along with the printed word. This technique I presented over the course of 4 days for 15 minutes daily over a

period of 2 weeks. Documentation kept of the daily dates, times, and outcomes of the Dolch words. The outcome of this documentation displayed in the appendix, a.

An Englishman, Edward William Dolch, PhD, in 1948, compiled a list of frequently used words in children's book in the 1930's and 1940's. The list consisted of 220 words and these words called Dolch Words List. This list has another name, Sight Words. These words are in general text 50 - 70% of the time. Dr. Dolch felt if a child could recognize this list quickly, it would enhance his or her reading ability. The list targeted to Kindergarten through third grade. (Farrell, L., Osenga, T., & Hunter M. 2013).

The dependent variable for this research was the measurement and documentation of the percentage of words the students knew during the pretest as in comparison to the development and growth seen at the posttest as displayed in appendix d.

Chapter Two: Literature Review

The intent of this literature review is to give insight on how the use of visual representation helps build vocabulary for deaf or hard of hearing students. Vocabulary is important in order to function in the world. The two best methods to learn vocabulary is through communication with others and reading the written word. Due to their impairment, deaf or hard of hearing students have difficulty with vocabulary. There are ways to work around this problem, such as the use of sign language, printed word, and integrate pictures. Research indicates that early intervention is crucial for deaf or hard of hearing children to learn vocabulary. Deaf or hard of hearing students struggle for years, yet very few of the population stay at the average level. There are several theses that appear to contradict one another, as well as support one another about effective methods to teach deaf or hard of hearing vocabulary. These studies share three main philosophies, which are key for enhancing vocabulary comprehension in deaf or hard of hearing students. These studies agree that early detection and early intervention, a continued use of sign language as a deaf culture communication language, and having visual representation are all-important.

The use of sign language with a child that is deaf or hard of hearing will help them develop better communication skills. The skills will keep the child from becoming frustrated when trying to rely a message or pass along a need of the child. In the deaf culture, sign language is superior to the spoken language, even if the deaf or hard of hearing person can speak. Neuroscientific research shows that our brains are set up and need to acquire the visual and spoken language in order to develop and receive the full potential of vocabulary comprehension; sign language must be used (Nussbaum, Waddy-Smith, & Doyle, 2012).

Early Detection and Early Intervention

Deaf or hard of hearing children are behind in their vocabulary; both written and spoken because of their disability. Children must have knowledge of vocabulary in order for their language development to flourish and to understand the written and spoken words of others. These children need to be successful in the classroom; therefore, developing a larger vocabulary will help them have a better reading comprehension as well as the confidence to use language in the hearing world. Children with larger vocabularies often have a better future in the worlds of both signed and spoken languages. Children with language exposure will benefit (Massaro & Light, 2004).

Vocabulary is a challenging task for deaf or hard of hearing children. An educational value is placed on developing vocabulary and language skill (Prezbindowski & Lederberg, 2003). Pikulski and Templeton (2004) explain the value of these skills that become of high importance because this is receptively for vocabulary that we understand for listening and reading and expressively for the vocabulary we use when speaking and writing. This would raise a question, are our vocabularies all the same for all areas: reading, writing, speaking and listening? When children enter school and become students, this is usually the beginning of their development of relations between printed content and spoken content. As we grow and develop into adults, our understood vocabulary is bigger than the vocabulary we use on a daily basis. In order for a child to be successful including socially, and economically it cannot be emphasized enough how important vocabulary is. Children that are living in a poverty-stricken environment will have a deficiency in social and verbal interaction with their guardians. This environment, when these children start school, will have affected their vocabulary that will not be as well developed as their higher social status peers. Teachers need to highlight important vocabulary

and help the children develop a desire to want to know more about vocabulary. Deaf or hard of hearing children have special difficulties in vocabulary development and need exposure to sign language as communication (Pikulski & Templeton, 2004).

Deaf or hard of hearing children often are not exposed to sign language in early stages of life and will likely be at risk of delayed language skills. Deaf or hard of hearing children experience problems completing spoken tasks. This is true for deaf or hard of hearing children with hearing parents, it is a task for them to maintain personal monologue. These children struggle because at an early age, they have not developed a way to read lips, therefore the lack of signing from parents and the inability to understand or lip read leads to communication and monologue being a task to maintain. Poor verbal skills in deaf or hard of hearing students hinder other skills. The verbal skills usually hinge on language, vocabulary, and receptive skills, (Edwards, Figueras, Mellanby & Langdon 2010).

Three levels of retaining vocabulary: first is slow learning, which is continual repetition of a word; second is direct rapid learning, which is expeditiously able to maintain vocabulary after only limited times of exposure; and lastly indirect word, which is no prompting or modeling needed and the vocabulary is obtained (Lederberg & Spencer, 2008). Kindle (2010) states early age is the ultimate time to enforce development of vocabulary that will last. Malloy (2003) state there is a tiny amount of time cognitive development is at its fullest. Malloy (2003), as cited by Magnuson (2000) states that the earlier a deaf or hard of hearing child is exposed to variables that build vocabulary the more quickly it can be absorbed.

The belief that with concrete rapid interventions into the deaf or hard of hearing child's exposure to vocabulary and having supportive families, a deaf or hard of hearing child will be able to have continued advancement just as their hearing peers. The ultimate goal would be for

the child to be identified and an intervention plan in place before the age of one year. The child will have drastic improvement with the early intervention if they receive their families support. Even though not all children will have the exact same results with the vocabulary advancement, it is more likely than not, language, communication, and social interactions will converge and develop in deaf or hard of hearing children (Sass-Lehrer, 2011).

In our society today, special needs children are recognized and a plan put into place, more so than long ago, with the No Child Left Behind educational law. These students are given every opportunity to be included in every aspect of education development. It is crucial that teachers aid these students in meeting or exceeding their potential in the educational setting. Young children that are deaf or hard of hearing will be placed in an early intervention action plan with their peers according to age- appropriate situations. Families of these children should always make sure that the professionals that are offering their services to their children are knowledgeable and proficient in the area in which they will be involved with their child. These professionals have to be qualified or the success of their child may be at risk of not reaching their full potential (Sass-Lehrer, 2011).

Use of Sign Language

The term sign language used in many different aspects; sign language is a language of its own (Malloy, 2003). Sign language has its own grammar, vocabulary, and literature used just as spoken language. Sign language is the first exposure that can be introduced to a child who is not capable of making sounds or putting speech into a pattern to form words. Professionals believe that learning spoken language and sign language parallel to one another forms a concern for parents. The parents feel that the dual learning of the ways of communication will cause interruptions in their understanding of one language or the other. However, early teachings of

sign language for a deaf child, is very important to help them begin to conquer language.

Children that are deaf or hard of hearing face challenges that go beyond their control. Depending on the specific situation, they may face; who will teach the child his or her beginning sign or how do they respond with the child, it just goes beyond the children's control.

Finding a familiar language with others can be challenging especially if the child's parents are hearing and no exposure to a deaf or hard of hearing child. The communication and language they use with each other is often limited or like a private language between the family members. The use of other ways to communicate may become popular in the family situation, such as a facial expression or use of body language, it becomes a barrier for the deaf or hard of hearing to communicate with those fluent in sign language and have a larger vocabulary (Prezbindowski & Lederberg, 2003). Another method to help children develop a wider vocabulary is to use sign language in areas that overlooked to be a time for learning. Situations such as in a grocery store, shoe store, even at the park during a time of play can be used as time to enhance vocabulary. There may be a gray area when trying to capture the time when a child is using sign language to obtain information about their vocabulary comprehension. The socio status, as well as the mentality level of the child, must be taken into consideration.

Nussbaum, Waddy-Smith, and Doyle (2012) discuss sign language with play can be a certain level of importance depending on the child. They have devised levels of sign language that is used and described as:

- **Foundational:** the root word of this use is foundation it will help develop and give a head start to early language development. Temporary use of sign language is used and once the hearing appliance begins to work, the child will then use verbal speech.

- Transitional: the early language that developed with the appliance and then gradually stops once the child has a language that is fluent.
- Differentiated: the use of sign language will continue parallel with the spoken language.
- Dominant: the use of sign language at all times.
- Bimodal-bilingual: to have knowledge of and use of two languages, sign or spoken.

Staden (2013) contributes that in order to develop vocabulary and literacy skills; there are three important components:

- The combination of visual representation
- Use physical strategies
- Modes of reading need to be accompanied with sign language.

In order for children to prosper in both reading skills and overall knowledge, their learning environment must be set properly. This could be done by use of pictures and the written word throughout the classroom, having a vocabulary word area to review with the student daily, and by playing games that will help the student recall and retell previous vocabulary words as well as newly introduced vocabulary.

Use of Visual Aides

When a deaf or hard of hearing child exposed to a visually enriched environment, they can typically maintain a vocabulary that is close to that of their peers. Deaf or hard of hearing children display three levels of abilities to familiarize words: (a) directly learning a new word can be difficult for a deaf or hard of hearing preschooler, b) deaf or hard of hearing preschoolers will have a few peers that can learn words quickly if the word is implied, (c) a few preschoolers

that are deaf or hard of hearing will be able to quickly maintain new words based on their age (Lederberg & Spencer, 2008).

It is beneficial to display pictures are beneficial during play and structured times throughout the day Teachers can use things such as pictures that make up a book or pictures that can be placed in order to make student realize a timeline Prezbindowski & Lederberg, 2003).

Another way to integrate pictures is to introduce them during story time. Trussell and Easterbrooks (2013) add that use of picture cards during read alouds will enhance the vocabulary and boost comprehension. The colored picture cards should be of real objects and include the printed word. Deaf or hard of hearing students can build their vocabulary through pictures established during storybook reading and use of the open-ended question and answer time. To increase vocabulary, a targeted word will be accompanied with a picture and discussed several times. The targeted word will be finger spelled; the student signs the word and says it aloud.

A way to have continued development of imagination and growth of vocabulary is to show the children a couple of pictures that go along with the cartoon they just watched. After the cartoon has finished, show the children two pictures and they get to pick one of the pictures and complete an ending to the story. The pictures give them a start that will begin the thought process moving and aid in recall of vocabulary that was in the cartoon. This helps the deaf or hard of hearing student develop a way to understand imagination. This process will help build their vocabulary and enable them to establish fairy tales (Levrez, Bourdin, LeDriant, Forgeot d'Arc & Bandromme, 2012).

Benefits

It was revealed, that if hearing impairment is detected early, receptive vocabulary would develop within the normal peer range for children that are deaf or hard of hearing. Universal hearing screening has indicated that it is the first initial early intervention that administered once a baby is born (Kiese-Himmel, 2007).

Deaf or hard of hearing will see significant results regardless of the type of assisted hearing device they have. The use of correct grammar and critical thinking skill support building a firm foundation of vocabulary for deaf or hard of hearing students. The deaf and hard of hearing will see significant results regardless of the type of assisted hearing device they use (Edwards et al., 2010).

The baselines on vocabulary set for children in all areas, such as development of language, cognitive skills, earlier interventions and development of educational value. The use of spoken language or sign language can be compared to each child individually in a vocabulary assessment. Every assessment given can tell us about the development of the deaf or hard of hearing children's vocabulary. There should be instruction, communication matching, cognitive skills and visual aids that are incorporated to show support learning for deaf or hard of hearing students. Research shows interventions that use more picture vocabulary have a positive outcome for education of deaf or hard of hearing students Prezbindowski & Lederberg, 2003).

The phonemic awareness and phonics skills of the deaf or hard of hearing students maintained some use of these skills. Their study completed a reassessment on some of their preschool children that were attending an entry-level elementary school and it was concluded that the preschoolers demonstrated reading levels that exceeded their age appropriate levels.

Furthermore, the higher standards that the teachers and parents expect from these children can have a huge mark on their development. With proper usage of instructional technology that can be suitable to each child's needs at age appropriate levels, students have potential to reach higher standards. This concludes the teacher and professionals that expect higher performance from the student will lead to maximum performance (Wang, Y., Engler, K. S., & Oetting, 2014) (as cited by Wang, Spychala, Harris & Oetting, 2013).

Regardless of whether a child is hearing, deaf or hard of hearing language development, thinking skills and social skills can be strengthened by early communication with these children. If children are exposed later and the level of language is deficient, it may hinder their potential progress. A common denominator these children share, in addition to hearing loss, is the children were supported in critical communication (Malloy, 2003). Evidence shows babies who learn sign language perform higher on tests, have higher IQs and tend to score higher socially and academically than their peers. (As cited by Conner, 2002) the larger the vocabulary that is taught earlier the higher language ability. Behavioral problems caused by the lack of a way to communicate a child's needs are avoidable with use of sign language.

A good option to consider for a child that is much lower than their hearing peers are and not ready to be mainstreamed should be to try self-contained classes. These classes are designed for the child rather than typical classes. Deaf or hard of hearing to be successful across all domains need to be provided with a richer classroom setting with hearing peers that can also act as models to expose them to age-appropriate behavior and language skills. Mainstreaming for deaf or hard of hearing children often times lead to them feeling like an outsider rather than a part of the class. Many times the classroom settings are too large and the noise levels are too

high which means these deaf or hard of hearing children need to have extra support (Mellon et al., 2009).

There four components that hinge from vocabulary are being able to communicate, read, think and learn. Deaf or hard of hearing, children have vocabularies that are greatly reduced. Children that have weak vocabularies are not able to read the printed word and receive the full understanding of what was intended. Their comprehension will be deficient at a minimum. Deaf or hard of hearing children learn new vocabulary at a much slower rate (Luckner, J. L. & Cooke, C., 2010).

Conclusion

This literature demonstrates with early intervention for deaf and hard of hearing students, the development of language, cognitive skills, phonemic awareness, and phonics will flourish if the child is properly introduced and instructed. This development will be in conjunction with sign language and pictures as well as a concrete object. These achievements can be seen if there is much positive communication with the child, parents, and professionals. Confirmation that this is a positive way to interact and teach a child has been proven through documented research. A solid foundation is essential for a child to be able to become successful and have educational growth similar to their peers. The expansion of a child's vocabulary is not an easy task but is necessary to develop using all tools possible to reach the highest outcome. This will reveal progress that can be seen as well as documented.

Sign language can be beneficial for the hearing and deaf or hard of hearing children alike. Sign language users can become less stressed when trying to convey a message at an age when the spoken language is not fully developed or if an individual is not developing age-

appropriately. Sign language is a vital communication language for the deaf or hard of hearing. Sign language can help a deaf or hard of hearing child learn to communicate and develop language skills necessary to achieve and obtain literacy skills. Although sign language is difficult to learn, it is also like having a three dimensional way of speaking. Once sign language is learned, it will help the teacher understand the sensitivity of the issue and make one become aware of the deaf culture.

Chapter Three: Procedures and Methods

Hypothesis

A hearing-impaired first grade student, who had Dolch sight words provided using prompting and model, sign language, and sight word flash cards, was able to better to comprehend vocabulary words.

Setting and participants

This study focused on one first grade student. This student participant was located in Southern Wyoming County, WV. A purposive sample would be a sample that represented less than 1% of the counties student body. The advantage of this study was the focus on the hearing-impaired first grade student. The disadvantage of this study was the population with this criterion was so minimal. The deaf or hard of hearing teacher served as the main participant with this student; this was her normal itinerant schedule with this student.

Variable

The study had stipulations such as the students' ability and the students' degree of hearing loss, as well as the teachers' personal teaching style and the effectiveness of the flash cards and sign language. The first grade student's reported hearing loss was present as part of the study.

The independent variable was the flash cards accompanied by the sign language that was be used by the DHH (Deaf and Hard of Hearing) teacher. The quantitative dependent variable was the achievement of the selected variable Dolch sight words used for this study. This recorded scores at daily attempts of the selected Dolch words, appendix b.

Threats to validity

The pretest and the posttest were the same tests. This may indicate the validity of the study. However, due to the academic level of the participant, it was seen as no threat. The student was hearing impaired but if this student had adequate sleep and his proper medications from home, it could potentially affect the test results.

Treatment

The DHH teacher implemented the test of Dolch sight words. The DHH teacher is certified in sign language. The posttest was administered using sign language and flash cards, in which a daily percentage recorded on correct answers of increased vocabulary.

Measures

The Dolch sight words designed by an Englishman, Edward William Dolch, PhD, in 1948 were used at an age appropriate and grade level. This study was composed of 10 Dolch sight words. The DHH teacher went through the entire list of ten words showing the flash card, signing the word, daily, and then recorded according to the correct amount of words acquired over the period of the study, appendix, c.

Chapter Four: Results

This study was designed specifically to see the effects of the use of Visual Representation with a student that has a hearing impairment. The seven-year-old student has moderate hearing loss. The Dolch sight words were introduced daily for two weeks 15 minutes each day. The pretest was administered only once. The individual results from the pretest are as follows:

Appendix A

Dolch Sight Words on Flash Cards

Dolch Sight Word	Correct 2/25/16	Incorrect 2/25/16
Little		X
Run		X
Down		X
Yellow	*	
Play		X
Three	*	
Help		X
Big		X
Funny		X
Jump	*	

Figure 1. Dolch Sight Words previously introduced but not recognized.

The results below reflect four days a week for two weeks at 15 minutes daily of the words taught with the presentation of the picture and sign language.

Appendix B

Dolch Sight Words on Flash Cards with Pictures and Sign

Dolch Sight Word	Correct 3/16/16	Incorrect 3/16/16
Little	*	
Run	*	
Down		X
Yellow	*	
Play	*	
Three	*	
Help	*	
Big	*	
Funny	*	
Jump	*	

Figure 2. Dolch Sight Words with Picture card and Sign Language incorporated

This final test administration came after the student was placed on Alternative School confinement.

Appendix C

Method	Mean	SD	Median	Range	T value
Word Only	.30	.88656	5	6	.70208
Words with pictures and sign	.90	1.2589	5	6	.4200
t-test*	-.60	-.37234	5	6	.28208

Figure 3. Summary of the two results

Appendix D

This represents the posttest results.

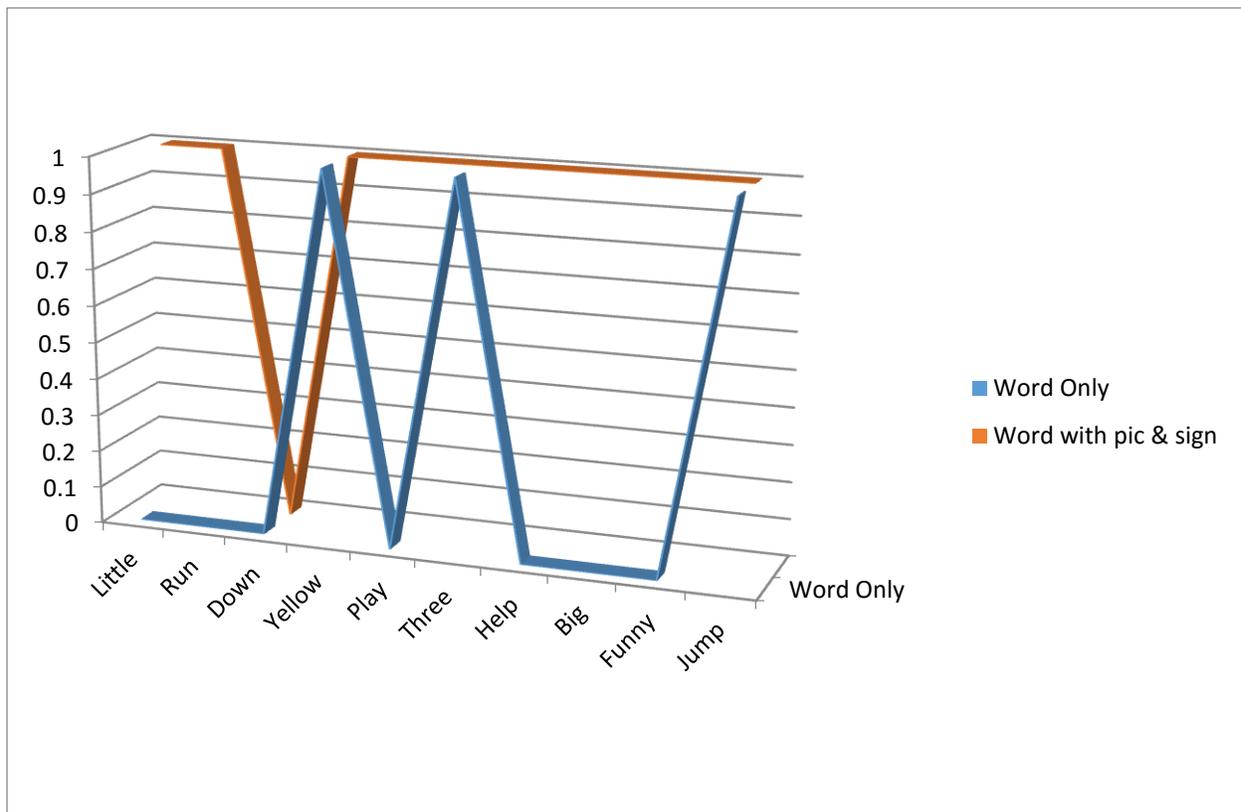


Figure 4. Dolch Sight Words Learned

Limitations of the study

The study was limited due to a number of issues. The first is that the study consisted of only one student because it is generally a low incident population. The study was during a short time frame due to the student being suspended and attendance at the Alternative School. Due to these limitations, it reduced the amount of time available for the instruction to take place.

Chapter Five: Discussion

The purpose of this study was to find out if deaf or hard of hearing students had exposure Dolch sight word flash cards along with sign language and picture would help enhance the vocabulary knowledge and recognition of the word. The ultimate goal was to find if deaf or hard of hearing students had exposure to sign language and pictures to help enhance the vocabulary knowledge. This research focused on the use of Dolch Sight Words along with sign language and pictures. The research was conducted in a secluded area with no distractions in the room. Incorporation of sign language and the picture was more effective than the traditional flash cards. The student seemed to enjoy the change made to learn the Dolch sight words.

Andrews, J.F. (2012) reading to deaf children who sign, suggested the signing gave the student a more clear understanding of the events which unraveled during story time. My student's hearing loss was aided with bi-lateral hearing aids. However, with the use of sign language and pictures, the student seemed to enjoy learning this style much better than the typical sit in desk flash card type of learning. The student joined in and made conversation about some of the words that he could relate to with an event in his own life.

Results from the visual representation showed the scores were consistently better after the introduction of sign language accompanied with pictures appendix c. The gains and growth of the vocabulary comprehension were almost instant. The ability to connect the word, with the sign as well as the picture was significant for the student to understand the vocabulary appendix, d.

In addition to the process, the teacher incorporated a sentence using the Dolch sight word, to make connection to the word and proper usage in a sentence. Dolch sight words are difficult to

sound out, so this method helped the student identify the Dolch sight words and connect them with meaning.

The student was asked the word on the flash card and replied multiple words, "I don't know". Within the ten words, the student consistently said he did not know the word. Out of the ten words the student identified yellow, three and jump. Upon incorporating, the sign to each word and showing the picture the student was able to identify 9 out of 10 Dolch sight words successfully. The student also used the flash cards to match up with the picture and included the use of sign. Sight words are difficult for a struggling student, so with this technique the process was fun and enjoyable.

The teacher asked the student if he like this style of learning and he replied, "It was fun!" Therefore, in order for this student to learn Dolch, once a dreaded task, changed the style of presentation toward his success. This method does not discount the effectiveness of flash cards. Flash cards are a very effective tool. However, for this student, there needed to be more for him to be able to maintain Dolch sight words.

This research resulted in significant outcomes and showed an increase of Dolch sight word comprehension. Now this student's vocabulary has expanded by the added vocabulary learned from Dolch sight words. This research should be a useful tool for other teachers that have deaf or hard of hearing students that are struggling with vocabulary words.

I would recommend this to other educators, not only beneficial for deaf or hard of hearing students but this would also be beneficial to students with a learning disability.

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