

**DIALOGIC PICTURE BOOK READING:  
AN EARLY INTERVENTION STRATEGY  
FOR LANGUAGE REMEDIATION**

**MASTER'S PROJECT**

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University of Dayton, in Partial Fulfillment  
of the Requirements for the Degree  
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by

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DIALOGIC PICTURE BOOK READING AS AN EARLY INTERVENTION STRATEGY FOR LANGUAGE REMEDIATION ( pp.), May, 1997

Faculty Advisor: Shauna Adams, Ed. D.

**PROBLEM.** It has been noted in various studies that many two and three year old children experience expressive language delays. These delays result in frustration for both the parent and child. Further studies have shown the long term advantage of intervening early in the lives of these children. Future academic problems can be alleviated or lessened if these delays are remediated in the young child.

This study evaluated the effects of Dialogic Picture Book Reading in correcting these delays.

**PROCEDURE.** Twin boys who are three years old were the subjects of this experiment. They exhibited a one and one-half standard deviation in expressive language. The researcher used the methods of Dialogic Picture Book Reading to read to the boys. The intervention took place twice a week for five weeks.

**FINDINGS.** Measurement took place by coding a videotape of both the initial and final Dialogic Picture Book Reading sessions. Three areas were looked at: responses of the children, length of utterance, and engaged behavior. The responses of the children decreased from the first to the last videotape. Length of utterance increased significantly. Engaged behavior decreased slightly.

**CONCLUSIONS AND/OR RECOMMENDATIONS.** The children increased their length of utterance which suggests that they internalized the language. The goal of Dialogic Picture Book Reading is for the child to become the eventual teller of the story. This increase in length of utterance shows that the goal was reached.

### Acknowledgements

I want to thank Dr. Shauna Adams for helping me to complete this thesis. Her patience, support, and good humor have been so appreciated. I am inspired to reach for the best in early childhood special education because of her example.

I also want to thank Xavier and Peyton who are both a joy. I wish the very best for them throughout their lives.

## Dedications

This document is dedicated first to my husband, Cliff. Thank you for your constant encouragement as I worked on this degree. I'm glad God chose you to be my life's partner.

To my children, Nathan, Nicholas, and Adam Cronkleton, who are the light of my life. Nathan, you teach me about the value of hard work and perseverance. Nicholas, you continue to bring laughter into my life. Adam, you have given me invaluable help on the computer and continually supported me. Each one of you contributed your gifts to help me complete this thesis.

To my parents, Robert and Marjorie Gill, whose loving support has been with me every day of my life. How blessed I am because of them.

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CHAPTER I  
INTRODUCTION AND  
REVIEW OF THE RELATED LITERATURE

Our world is increasingly becoming a world of rapid communication. The child who falls behind in the communicative skill of language is at a distinct disadvantage. It is vital to find ways to help these children overcome their delays so that they can reach their full potential. Research that seeks to remediate language delays needs to continue to be given a high priority. Research that focuses on the youngest children has demonstrated that early intervention has long term benefits (Hanson and Lynch, 1989). This chapter will include the purpose of the study, historical overview, the research question, research of Dialogic Picture Book Reading, advantages of Dialogic Picture Book Reading, definition of terms, and limitations.

Purpose of the Study

Dunst, Lowe, and Bartholomew (1990), state that frustration from both the parent and the child has been observed when communication does not develop normally. Some children cope by becoming passive. They give up on trying to communicate and retreat into their own little worlds. Others have frequent and prolonged temper tantrums because of their anger in not being able to communicate (Hamaguchi, 1995). These emotional and behavioral problems

increase the parents' anxieties. Attention to this area of early childhood speech delay has only been given priority in the past twenty-five years. The remediation of speech disorders has developed slowly over the course of history. A review of this development follows in the next section.

### Historical Overview

Van Hattum (1980), states that Greek writers began writing about defective speech as early as the fifth century B.C. They attempted to find ways to alleviate speech and language disorders. During the middle 1880's, physicians in several European countries began to study ways to remediate speech disorders. Germany provided the leadership in this effort. Communication disorders were not addressed until the early twentieth century. In 1910, Chicago and Detroit hired school personnel to work with children who were experiencing speech and communication delays. Other major cities soon began to hire people to help children who had speech and language deficits. Those hired were referred to as speech-arts specialists. They tended to have no special training in communication disorders. During the 1920's, universities began to offer course work in speech and language disorders. The area of speech and language has grown remarkably during this century. Today, every public school district in the United States is required to have a trained speech therapist available. Several organizations and journals continue to research and advance the knowledge and practice of speech and language delays and remediation (Cartwright, Cartwright, and Ward, 1989).

For years, parents struggled on their own to handle problems with speech in their preschool children. In 1974 however, the federal government responded to parents' demands for help with their developmentally delayed young children. At this time the government amended and expanded the Education of the Handicapped Act (1986). Because of this action, states are now required to provide full educational opportunities from birth for all children with a delaying condition. The government responded not only to parents' demands but also to studies done at that time. These studies began to show the importance of intervening with developmentally delayed children while they were young (Kirk, Gallagher, and Anastasio, 1993).

Six areas of development among young children are typically assessed: gross motor, fine motor, cognitive, language, self help, and social/emotional (Hanson and Lynch, 1989, Linder, 1993). The most frequent area of developmental delay is in the area of language. In a 1991-1992 survey of 851,000 children under six years of age with disabilities, thirty percent had limitations in communication development (Bowe, 1995). Researchers found that without extra help in the form of therapies or educational stimulation, the child with disabilities may develop very slowly and, as an adult, reach a much lower level of functioning than the child with disabilities who has had the benefit of early childhood special education (Meisels and Shonkoff, 1990). The early years are a vital time in the child's development and this time needs to be spent wisely (Odom and McLean, 1996; Hanson and

Lynch, 1989; Joint Dissemination Review Panel, 1994). Failure to address the earliest interactions of the child not only wastes time but may result in further developmental delays for the child (Hanson and Lynch, 1989). Disabilities are more easily corrected early in life and abnormal patterns are more easily prevented when intervention is done at an early age when the child's brain is open to experience and change (Kirk et al., 1993). The majority of studies done on the effectiveness of early intervention in remediating communication problems have shown that they can be corrected or markedly improved (Martin, 1988). Early intervention is a significant factor in predicting higher verbal skills by the age of eight (Meisels et al., 1990).

Children with early speech delays often experience a variety of academic difficulties when they reach school age (Hamaguchi, 1995, Arnold, Lonigan, Whitehurst, and Epstein, 1994; Whitehurst, Arnold, Epstein, Angell, Smith, and Fischel, 1994). Crain-Thoreson and Dale found that language and psycholinguistic ability in kindergartners was the strongest predictor of reading achievement for the children in later years (1992). These findings further establish the importance of seeking ways to remediate early speech delays.

With so much research supporting the pervasiveness of communication delays, the frustration of both the parent and child, the importance of intervening early, and the risk of the child's future academic performance, the author sought to find a method that would be beneficial in remediating expressive language delays in

young children. Now that the purpose of and background to the study have been described, more details of the research design will be exposed.

### Research Question

Is Dialogic Picture Book Reading an effective strategy in increasing the expressive language ability of twin boys aged three years?

### Research of Dialogic Picture Book Reading

Whitehurst (1988) developed "Whitehurst's Dialogic Reading Training Program." In his research, Whitehurst sought to find a way to encourage expressive language in young children who were exhibiting delays (Whitehurst, Arnold, Epstein, Angell, Smith, and Fischel, 1994). He concluded that the language skills of middle class two year olds could be substantially increased by a one month program of picture book reading in the home if parents were trained in specific methods. In 1992 he collaborated with Marta Valdez-Menchaca. Together they sought to determine if similar positive effects could be gained when working with children from lower income families. Whitehurst and Valdez-Menchaca did a study in a day care in Mexico. This study also showed that substantial gains could be made through Dialogic Picture Book Reading, (1992). This research was expanded in 1996. It was concluded that DPBR has considerable potential for facilitating language development (Dale, Crain-

Thoreson, Notari-Syverson, and Cole, 1996).

These studies verify what many parents and educators have long assumed: reading books to young children can help to develop their language (Bus and Van IJzendoorn, 1988). Whitehurst not only verified the assumption that picture book reading promoted language acquisition, he also broke the process of book reading down into various components. These components require the adult to: ask open ended questions, imitate the child's responses, expand the child's responses, ask follow up questions, and wait a minimum of two seconds for the child's response. Each of these components will be further described in chapter two in the procedure section. Whitehurst found that these components were lacking in the majority of adult/child book reading sessions (Whitehurst, Falco, Lorigan, Fischel, Debaryshe, Valdez-Menchaca, and Caulfield, 1988).

Dale and associates (1996), determined that shared book reading provides a powerful context for learning language. This context is powerful for many reasons. Debaryshe found that more systematic changes happen in adult language during book reading than in other conversational settings. These changes promote language acquisition (1993). Hoff-Ginsburg (1991), also noted that adult language is more complex during book reading than during free play or times of caretaking. When both the adult and child are focused on a book, their joint attention further aids language development (Tomasello and Farrar, 1986). Cross (1984) also researched this concept of joint attention during book reading. He found that the

pictures in a book provide a clear shared topic for the adult and child. Often a child's articulation is poor. When the adult and child are both looking at a picture, the adult can better understand what word the child is trying to say. Playing with toys may provide a similar joint attention effect. However, the abundance of toys that are contained in most play rooms do not allow for the joint attention that looking at a single book together affords.

Research has shown that DPBR can foster significant gains in language in a short period of time. In a one month study done at a day care center, children made language gains of between six to eight and one-half months on standardized tests. The researchers concluded that these gains were made because DPBR seeks to change the roles in book reading. The child ceases to be a passive learner and is encouraged instead to become the eventual teller of the story. The adult begins by asking simple questions about the pictures in the book. At the end of the one month research period, the adult asked questions such as, "What's happening on this page?" (Valdez-Menchaca, and Whitehurst, 1992). This highly interactive story reading style enhances a child's expressive language. Storybook reading has traditionally entailed a child listening to the adult read a story. The adult might occasionally comment or ask a question. DPBR involves the child in the telling of the story (Crain-Thoreson and Dale, 1992). Adults typically adopt a directive, less responsive style of interaction when communicating with children who have expressive language delays. This style often results in frustration for both the adult



and child (Cross, 1981). Crain-Thoreson and Dale (1992) have found that this frustration is somewhat lessened when the adult adopts the less directive and more interactive style of communication used in DPBR.

The National Association for the Education of Young Children recommends reading to one or two children at a time rather than a whole group of two and three year olds as is traditionally done (Bredekamp, 1993). DPBR utilizes this research as it recommends reading to one child at a time. When the adult reads to one child at a time, interaction can more freely take place than when a whole group is involved. The child has the opportunity for greater joint attention and interaction. Researchers concur that these elements lead to expressive language gains (Whitehurst et al., 1994).

#### Advantages of Dialogic Picture Book Reading

Research has shown that DPBR is an effective way to increase expressive language. DPBR has some other advantages as a method for increasing language. First of all, it is often difficult to find ways to teach two and three year old children. DPBR was originally designed to be used with two year old children, making it an appropriate tool to be used with the very young (Dale, et. al., 1996). Bredekamp (1993) concurs that reading to either one child or a small group of children is a developmentally appropriate way to foster language in young children.

A further advantage of DPBR is that parents, teachers, and caregivers can be easily trained in methods of DPBR. Dale trained parents in the use of the various

components of DPBR. This training was done in two different sessions and included a videotape, handouts, and role playing (Dale, et. al., 1996) A degree in early childhood education is not necessary in order to be successful with DPBR. Therefore the method can be used by a wide variety of adults. Video training in the method is helpful, but not essential. An adult can become proficient with DPBR by reading through the components and practicing them over time (Whitehurst et. al., 1994).

Dialogic Picture Book Reading is generally a pleasurable activity for both the adult and child. This leads to another advantage of DPBR. Both the adult and the child are more likely to want to engage in the session if they find it enjoyable. Adults are specifically encouraged to make the experience fun (Dale, Crain-Thoreson, Notari-Syverson, and Cole, 1996). The child may enjoy sitting on the adult's lap. Laughter and enthusiasm should be fostered. The positive memories from the previous encounter with the story should prompt both participants to eagerly anticipate their next time together, and they will be likely to read together more often. Frequent book reading will lead to more rapid language acquisition (Swinson and Ellis, 1988).

Another advantage of DPBR is that it may help prevent academic problems in the future for young children with expressive language delays. Research shows that oral language and literacy are skills that are acquired in much the same way. A longitudinal study showed that a composite measure of language and

psycholinguistic ability in a group of 320 kindergartners was the strongest predictor of reading achievement when the children were in the first, second, third, and sixth grades. It was concluded that improving children's early language skills might help their later ability in the academic skill of reading (Butler, Marsh, Sheppard, and Sheppard, 1991). Other Researchers have concluded that children with early speech delays often experience a variety of academic difficulties when they reach school age (Hamaguchi, 1995; Arnold et. al., 1994). DPBR may help a young child acquire language and eliminate or lessen future academic problems (Whitehurst et. al., 1994).

DPBR has been shown to effectively increase language in middle class children who are typically developing (Whitehurst et. al., 1988). It also fosters language development in children who are from low income families and have language delays (Valdez-Menchaca and Whitehurst, 1992). Therefore, DPBR has the advantage of helping young children from varying socio-economic backgrounds and with a broad range of linguistic abilities.

#### Definition of Terms

**Dialogic Picture Book Reading** is shared book reading between one or two children and an adult that is marked by dialogue between the two.

**Expressive Language** is the ability to speak standard English.

**Early Intervention Specialist** is a professional trained in work with children aged birth to three years, methods of education, and other kinds of intervention for

young children with disabilities or developmental delays.

Picture Books are books written for young children that feature illustrations and minimal text.

### Limitations

This study contains some limitations. The first limitation concerns the sample size. The two children comprising the experiment do not create a large enough group needed to generalize the results to other populations. Furthermore, the study will take place over a five week period. Dialogic Picture Book Reading will be done twice a week for a total of ten sessions. This may not be a long enough span of time to achieve discernable results, thus resulting in another limitation. Difficulties in hearing the childrens' responses on the video tape may result in discrepancies in data collection between the two analyzers. This creates a further limitation.

## CHAPTER II

### METHODS

This study is based on Dialogic Picture Book Reading (DPBR), which is a specific method for reading books to young children based on the work of Whitehurst and his associates (1988). Whitehurst sought to develop a method of storybook reading to young children that would increase their expressive language. His underlying assertion was that language during a storybook reading session is more focused and concentrated than language during a session of playing with toys. In DPBR the adult does not read the text from cover to cover to the child. Instead, a dialogue between adult and child is cultivated. This dialogue takes place with one or two children at a time. This adult to child ratio gives the child an ample opportunity to interact with the adult. Whitehurst concluded that there is a significant potential for increasing expressive language through DPBR (Whitehurst,yshe, 1988).

#### Characteristics of a Dialogic Picture Book Reading Session

DPBR contains specific components: open ended question, imitation of the child's responses, expansion of the child's responses, follow up questions, and a two second minimum wait time for the child to respond. Each of these components is discussed in detail in the procedure section of this chapter. In addition to these components, there are other factors which are characteristic of

DPBR. These factors will be explained in the following paragraphs.

The selection of a book to read is important. Choosing a book that supports a story narrative through interesting and stimulating illustrations is key. The book must not rely on the text to tell the story because the child needs to be able to become the storyteller by "reading the pictures" (Dale et. al., 1996). Care should be taken to match the book to the interests and ability of each child (Swinson and Ellis, 1988). The adult should preselect an appropriate group of books and allow the child to choose one from the group. This gives the young child a needed feeling of autonomy (Valdez-Menchaca and Whitehurst, 1992).

Dialogic Picture Book Reading is also characterized by frequent, short sessions. Ideally it should be done on a daily basis (Hamaguchi, 1995). It is frequently difficult to accomplish this goal in a nursery school setting, but may be implemented by the parent at home on a regular basis (Whitehurst et. al., 1994). Salzberg and Villani (1983) recommended reading to children for five to twenty minutes, depending on the attention span of the child. Valdez-Menchaca and Whitehurst concurred with these findings. DPBR sessions may last five minutes at the beginning and lengthen over time as the child begins to increase his attention span.

Another characteristic of DPBR is that the time is to be made a rewarding and comfortable experience for the child. The child's interests are to be followed rather than the adult's preset agenda. If a child wants to spend five minutes on one page

and is then through with the session, this should be respected (Whitehurst et. al., 1994). This concept of child directed learning concurs with the philosophy of The National Association for the Education of Young Children (Bredekamp, 1993). To further the goal of making DPBR a rewarding experience for the child, the adult needs to praise and encourage the child throughout the time of book reading (Arnold et. al., 1994; and Whitehurst et. al., 1994).

### Setting

School. This study takes place in a school that is governed by the county board of mental retardation and developmental disabilities. It serves the population of children with mental retardation and/or developmental disabilities in a rural midwestern county. The facility houses programs for newborns through twenty-one year olds.

Data collection took place in the early intervention portion of the building. This area is a newly renovated suite for children aged birth through three years old and includes: a parent waiting area with comfortable seating for both parents and small children, an office for the three early intervention specialists, a restroom, a large playroom that is well equipped with age appropriate toys, and a room that is designated for circle time that has no distrating toys in it. The treatment also took place in this room.

This suite houses a nursery school that begins in January and lasts through May for children who turn three during the school year. The author teaches two of the

four separate nursery school classes that are held in this facility. Each class is comprised of ten children. Thirty percent of the children are typically developing and the remainder have disabilities. Each class has one certified early intervention specialist and two assistants.

Community. The county where this study takes place had been a largely rural area until a few years ago when industry began moving into the region. This change has resulted in a rapid increase in the county's population. A new facility for adults who are mentally retarded or developmentally disabled was recently built, thus freeing up space that was renovated for the early intervention suite. Plans are also underway for a large expansion to the building for the growing preschool portion of the program.

### Subjects

This study took place with twin three year old boys. They live with their mother, father, and one year old sister. Their mother is not employed outside the home and spends a lot of time working with her children. She readily incorporates any suggestions from the early intervention specialist. The parents include the children in their athletic activities such as tennis and basketball. The boys have gross motor skills that are above age level. Their fine motor, self help, and cognitive skills are age appropriate according to the Early Learning Accomplishment Profile. The Preschool Language Scale test shows a one and a half standard deviation delay in the area of language. The boys, who



were born two months prematurely, have some trouble with asthma, but are generally healthy.

## Procedure

### Treatment

A Dialogic Picture Book Reading session includes one or two children and an adult. The adult incorporates specific components that have been identified by Whitehurst and his associates. These adult initiated components should evoke specified responses from the children (Whitehurst et. al., 1994). In the following sections, both the adult initiated interactions and the child responses will explained.

### Adult Initiated Interactions

Dialogic Picture Book Reading is comprised of five adult initiated interactions: 1) open ended questions, 2) imitation of the child's correct response, 3) expansion of the child's correct response, 4) follow up questions, 5) a two second minimum wait time for the child to respond. Detailed descriptions of each component follow.

Open Ended Questions. During and following the reading of the book, the adult will ask open ended questions. These are questions that cannot be answered with a "yes" or "no" response. Open ended questions begin with words like "what", "where", "who", or "how". They require a more verbal, diverse, and thoughtful response than would be common with yes/no questions. Instead of asking, "Is the dog going to school?" the adult asks, "Where is the dog going?"

Open ended questions frequently focus on objects, people, attributes, and actions that are pictured in the story.

Imitations. The adult also includes imitations of the child's correct responses in DPBR. An imitation is described as a restatement or paraphrase of the child's response. This helps the child to know that the response was correct and encourages more responses. The adult might say, "Yes, going to school."

Expansions. Expansion of the child's response is another component of DPBR. This technique confirms what the child has said and adds more to the statement, thus expanding the child's experience of vocabulary. Expansions should add only a little information so that the child can imitate them. The adult's expansion to the child's response, "Going to school" might be, "The dog is going to school with his friends."

Follow Up Questions. Also included in the DPBR session is follow up questioning. Once the child has answered the question of where the dog is going and the adult has expanded the answer, the adult may ask a follow up question. Follow up questions continue and expand the dialogue. A follow up question might be, "What color is the dog?"

Two Second Wait Time. A two second minimum wait time for a child's response is required. Too often the adult does not allow the child enough time to think of and formulate a response to the question. The adult may choose to give a much longer wait time than two seconds.

### Child Responses

The preceding five paragraphs explained the five components of DPBR that the adult incorporates. These components should elicit certain responses from the child: 1) statement about the story, 2) question about the story, 3) response to an adult question about the story, 4) an imitation of an adult utterance about the story, 5) a nonverbal gesture about the story. These responses will be described in more detail in the following five paragraphs.

Child's Statement About the Story. During DPBR, the child may make a statement about the story. This statement needs to be directly related to the text or illustrations. This statement will not be an imitation of what the adult has said in the past ten seconds. It will be a statement of the child's own initiation, and not a response to an adult question. The statement will include one or more recognizable words. The child may say, "Dog funny."

Child Initiated Question About the Story. Another response to look for is a question from the child about the story. The question must be directly related to the text or illustrations. The question needs to be of the child's own initiation and not an imitation of a question that the adult has asked in the past ten seconds. The question will contain one or more recognizable words. The child may ask, "Where dog?" as he looks at the page.

Child Response to Adult Initiated Question. The adult will also want to note if the child responds to a question from the adult about the story. One or more

recognizable words that correctly answer the question are needed in this response. The child may say, "Dog go school," in response to "Where is the dog going?"

Imitation of an Adult Utterance. An imitation of an adult utterance is another verbalization to look for in DPBR. This may be an imitation of the adult's question or statement. The adult may say, "The dog is going to school." The child may imitate by repeating the whole sentence or a section of it, "Dog school." This imitation must be made within five seconds of the adult's vocalization.

Nonverbal Gesture Relating to the Story. Finally, the adult wants to note if the child uses any nonverbal gesture that relates to the story. These gestures might include the child nodding or shaking his head, pointing to pictures or otherwise responding to the story through gestures.

### Measurement

To measure the effectiveness of the DPBR intervention, a video recording was made during both the initial and final DPBR sessions. Each recording was done in the middle of the morning when the children were not hungry or tired. The recordings were done in the circle time room. This room was chosen because it is free from toys and other distractions. It is also a room that can be shut off from other children so that the subjects and adult can focus on the book. A camera was set up on a tripod so that the boys would not be distracted by another person being in the room. The boys and the adult sat on comfortable bean bag chairs. Each session lasted approximately ten minutes. During the sessions, the adult focused

on incorporating the adult initiated components of: open ended questions, imitation of the children's correct responses, expansion of the children's correct responses, follow up questions, and a two second minimum wait time.

### Evaluators

Video collection was coded by the researcher who had two years of experience as an early childhood special educator. A second data coder who was also an early childhood educator with one year of experience, helped to establish interrater reliability. The second data evaluator was provided with a detailed description of sample child responses as well as indicators of how responses would be coded. These responses were reviewed with the evaluator and specific questions were answered.

### Coding

The use of videotape as a means of data collection allowed for systematic and detailed review of five areas of child responses, the length of utterances, and engaged behavior.

Five Areas of Responses. Five specific areas of child responses were coded as the researcher viewed the videotape: the child's statement about the story, a child initiated question about the story, the child's response to an adult initiated question, an imitation of an adult utterance, and a nonverbal gesture relating to the story. Each of these five response areas was listed on paper. The researcher then viewed the videotape. A tally mark was recorded next to the

appropriate response as the researcher viewed the tape. If the child imitated an adult utterance, a tally mark was placed on the paper next to "Imitation of an adult utterance."

Length of Utterances. In addition to looking for and coding the five responses detailed above, the researcher sought to examine the length of each child's utterances. Length of utterance is a measure of the number of words a child uses in each verbal response. The researcher marked the number of words contained in each verbal response. Length of utterance was noted for each child for both the pretest and posttest.

Engaged Behavior. Finally, the researcher sought to investigate the engaged behavior of the boys as they participated in the DPBR sessions. Engaged behavior is exhibited by the child looking at the adult, looking at the book, responding verbally and through gestures, and being generally on task. Nonengaged behaviors included looking away from the adult or book and appearing to be focusing on something else, not responding verbally or with gestures, and being generally off task. The DPBR session was divided into minutes. For each minute of the time spent reading, the researcher noted whether each twin appeared to be engaged or nonengaged. If the child was engaged for fifty out of sixty seconds, it was credited as an engaged minute.

Videotaping took place during the initial and final Dialogic Picture Book sessions so that a comparison of the results between the two could be made.

The initial taping was done during the first time the children and adult met together for DPBR. The tape was then studied and the child responses were tallied. A separate tally sheet was done for each child. The videotape and corresponding tallies served as a pretest. The five week intervention of DPBR then took place. A videotape was made during the final DPBR session. After taping, the researcher viewed the new videotape. It was tallied in the same manner that was used with the first tape. This second tape and corresponding tallies became the posttest. A comparison between the results of the pretest and posttest was then made.

#### Interrater Reliability

The tallied responses were examined from both primary and secondary raters. The researcher wanted to compare the tallies made by each person in order to determine the percentage of agreement between the two coders. Interrater agreement was found to be reliable at 90.4 percent.

#### Data Analysis

Three areas were analyzed from the videotapes: child responses, length of utterance, and engaged behavior. Each of these three categories was coded on the pretest as well as the posttest. In the area of child responses, the coders used a checklist that indicated each of the five child responses. A tally mark was placed next to the appropriate response as the researcher viewed the videotape. Length of utterance was coded by counting the number of words each child said

every time he spoke. Engaged behavior was measured by dividing the videotape into sixty second intervals. Each child was observed throughout each interval for the purpose of ascertaining the percentage of on task behavior for each minute. Once the videotapes were coded, the number of tallies in each category were counted. The frequency was compared across categories for both the pretest and posttest. The results were analyzed and are presented in detail in chapter three.



## CHAPTER III

### RESULTS

In this chapter the results of this investigation will be reviewed. Included will be a description of pretest and posttest responses to Dialogic Picture Book Reading. The pretest and posttest response data will be presented in three tables.

#### Results of Children's Responses During Dialogic Picture Book Reading

Twin boys were the subjects of this experiment. The first Dialogic Picture Book Reading (DPBR) session was videotaped. This videotape was used to code the number of statements, questions, responses to questions, imitations, and gestures that each twin had in response to the story. The same procedure was followed for the posttest.

During the pretest, Twin 1 made fifteen statements, asked no questions, responded to questions twenty seven times, imitated adult utterances thirty two times, and used twenty gestures in response to the story (see table 1).

Posttest results for Twin 1 were: ten statements, no questions, twenty five responses to questions, sixteen imitations of an adult utterance, and twenty gestures. Twin 1 made five fewer statements on the posttest than on the pretest. The number of questions asked by the child remained the same. There were two fewer responses to questions on the posttest than the pretest. The number of imitations of an adult utterance decreased by sixteen from the pretest to the

posttest. Twin 1 made the same number of gestures during the pretest and posttest (see table 1).

Twin 2 made one statement on the pretest. He asked no questions about the story during the session. Responses to questions were made eleven times. Twin 2 imitated an adult utterance fourteen times, and had one gesture in response to the story.

During the posttest, Twin 2 had eleven statements about the story. No questions were asked. Thirteen responses to an adult question were recorded. An adult utterance was imitated five times, and seven gestures relating to the story were noted. Twin 2 had ten more statements in the posttest than in the pretest. The number of questions asked remained the same. Responses to questions increased by two from the beginning of the experiment to the ending. Nine fewer imitations of an adult utterance were made during the posttest. An increase of six gestures was measured from the pretest to the posttest. The results of the pretest and posttest are displayed in Table 1.

Table 1

Pretest and Posttest Results of Dialogic Picture Book Reading

Subject	Measurement	S	Q	R	I	G
Twin 1	Pretest	15	0	27	32	20
	Posttest	10	0	25	16	20
	Difference	-5	0	-2	-16	0
Twin 2	Pretest	1	0	11	14	1
	Posttest	11	0	13	5	7
	Difference	10	0	2	-9	6

Note: S = statement of child  
 Q = question asked by child  
 R = response of a child to a question  
 I = imitation by child of adult utterance  
 G = gesture made by child

### Results of Length of Utterance Responses

The videotapes made during the pretest and the posttest were also coded for the length of utterance of each response. The length of utterance stands for the number of words in a verbal response.

As seen in table 2, Twin 1 had a total of sixty-five one word responses on the pretest. Nine responses were two words in length. During the posttest, Twin 1 made twenty-four one word responses, twenty-six two word responses and one response had three words.

Twin 2 made twenty responses that contained one word, and six that were two words in length on the pretest. His posttest results on length of utterance were twelve utterances that were one word in length. Thirteen responses contained two words. Three word phrases were noted four times.

These data show that Twin 1 used forty-one fewer one word responses on the posttest. His two word responses increased by seventeen. The pretest contained no three word phrases whereas the posttest had one response of three words.

Twin 2 decreased his number of one word responses by eight. His two word phrases increased by seven. There were no three word utterances in the pretest. The posttest showed an increase of four phrases containing three words. Table two presents the results of the length of utterance data.

Table 2

Length of Utterance

Subject	Measurement	1 Word	2 Word	3 Word
Twin 1	Pretest	65	9	0
	Posttest	24	26	1
	Difference	-41	17	1
Twin 2	Pretest	20	6	0
	Posttest	12	13	4
	Difference	-8	7	4

### Results of Engaged Behavior

The videotapes were also used to code engaged behavior during the Dialogic Picture Book Reading. Each twin was observed during both the pretest and posttests. If they were engaged in the story for fifty out of sixty seconds, that minute was credited as an engaged minute. Each session lasted for ten minutes.

Twin 1 was engaged for all ten minutes on both the pretest and the posttest. Twin 2 was engaged for ten minutes on the pretest and nine minutes on the posttest. Twin 1 showed no change in engaged behavior between the pretest and the posttest. Twin 2 showed a decrease in one minute of engaged behavior between the pretest and posttest. The results of engaged behavior are shown in Table 3.

Table 3

Engaged Behavior

Subject	Measurement	Engaged Minutes	Nonengaged Minutes
Twin 1	Pretest	10	0
	Posttest	10	0
	Difference	0	0
Twin 2	Pretest	10	0
	Posttest	9	1
	Difference	-1	+1

## CHAPTER IV

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### Summary

This study purposed to determine if Dialogic Picture Book Reading is an effective strategy in increasing the expressive language ability of twin boys aged three years. The author sought to investigate this area because expressive language delays are so common among young children. These delays often result in a great deal of frustration for both the parent and child. Studies have repeatedly shown that intervening while the child is still young results in long term benefits. Children who have not had any remediation during the preschool years have more scholastic difficulty during their school years than do their peers who have had intervention. Because of the importance of remediating expressive language delays in young children, the author chose to research a method that could be effective in that endeavor. A review of the related literature brought to light Grover Whitehurst's work in Dialogic Picture Book Reading. Whitehurst's methods of reading books to young children for the purpose of increasing expressive language were tested.

The researcher set up a design that was patterned after Whitehurst's work. Adult initiated interactions from five categories were utilized during the sessions. The first interaction was to ask open ended questions. These were questions that



could not be answered with a "yes" or "no" response. They required a more verbal and thoughtful response than a question that required a "yes" or "no" answer. Secondly, the adult imitated the child's reply by restating or paraphrasing it. Next, the adult expanded the child's response by adding a small bit of information to it. Follow up questions were the next interaction that the adult incorporated. These continued and expanded the dialogue. Finally, the adult allowed for a minimum of two seconds for the child to respond to a question. This gave the child time to think and formulate an answer.

The researcher also looked for five specific responses from the children. First, it was noted if the child made a statement about the story. This statement needed to include one or more recognizable words. The author also noted if the child initiated a question pertaining to the story. This question also needed to include one or more recognizable words. The adult noted whether the child responded to a question that was asked. Again, one or more recognizable words from the child were required for a positive response. Next, the adult looked for the child to imitate the adult's utterance. This could be an imitation of either the whole sentence or a word. Finally, the adult looked for nonverbal gestures that related to the story such as pointing or nodding the head in response to a question.

The children's engaged behavior was also measured during the Dialogic Picture Book Reading session. Engaged behavior is defined as behavior where the

children are exhibiting the five responses listed above. In addition, they appear to be focusing on the book and adult for at least fifty seconds out of every minute.

Finally, the length of utterance for each child was measured. The length of utterance is the number of words a child uses in each verbal response.

The author worked with twin three year old boys who exhibited a one and one half standard deviation in expressive language on the Preschool Language Scale (Psychological Corp., 1992). The treatment took place two days a week and lasted for five weeks, resulting in a total of ten Dialogic Picture Book Reading sessions. The goal of the sessions was for the children to become the eventual tellers of the story.

During each Dialogic Picture Book Reading session, the book, Spot Goes to School (Hill, 1984) was used. The researcher used the five adult initiated interactions and elicited the five child responses. The initial session was videotaped and served as the pretest. The final session was also videotaped and served as the posttest. Each of the ten sessions lasted for approximately ten minutes. They took place in a small room that was free from toys and other distractions.

Both videotapes were coded by the researcher and another early intervention specialist. Coding was done by listing the five areas of child responses on a checklist. A tally mark was entered next to the correct interaction each time the child exhibited that particular item. A separate paper was made for each twin.

This procedure was followed for both the pretest and the posttest. Interrater reliability was also measured.

Twin 1 made fewer statements, answered fewer questions, and imitated the adult fewer times during the posttest than he did during the pretest. His gestures remained the same. However, his length of utterance increased. He was engaged for all ten minutes during both the pretest and posttest. Twin 2 made more statements and responded to more questions on the posttest than on the pretest. The number of imitations of an adult utterance decreased over the course of the study. The number of gestures between the pretest and posttest increased. The length of utterance for Twin 2 increased between the pretest and posttest. Twin 2 decreased his engaged behavior by one minute.

### Conclusions

One might think in looking at the results of this investigation that the expressive language of Twin 1 decreased over the course of Dialogic Picture Book Reading and that the expressive language of Twin 2 increased slightly. This would be true if the number of statements, questions asked, imitations, responses to questions, and gestures were the sum total of advancement in the expression of language. However, by the very process of Dialogic Picture Book Reading, the child internalizes language and requires less scaffolding from the adult. This scaffolding is often exhibited by adult behavior during Dialogic Picture Book

**Reading.** The goal of this method is for the child to become the eventual teller of the story. Therefore, by the end of the five week intervention, the child no longer needs as much of the adult's prompting during the story time. The children themselves are doing more of the actual talking.

Dialogic Picture Book Reading does cause the child involved to internalize language. Evidence of language development is the consistent use of longer utterances. If one looks at the table that describes length of utterance, significant gains for both children can be noted. Twin 1 made seventeen more two word responses on the posttest than on the pretest. He made no three word responses on the pretest, but gave one statement of three words on the posttest. Twin 2 increased his two word responses by seven utterances. On the pretest, no three word phrases were noted, but on the posttest he used them four times. These statistical results show that indeed, the children did converse in more complex ways by the end of the treatment. The researcher observed that the children initiated much more language during the posttest than during the pretest.

Both twins exhibited engaged behavior throughout all of the sessions except for the final posttest. During the last time of storybook reading, Twin 2 looked away from the adult and the book occasionally. The researcher used the same book during all ten sessions. Twin 2 may well have begun to tire of the book by the tenth reading. Twin 1 appeared to be enthused about the book throughout the entire five weeks. Different children have different personalities and

adjustments need to be made accordingly. If the author had sought to continue the research, a change in book might have been wise at this point.

It is interesting to note that no questions were asked by the twins in either the pretest or the posttest. Questioning may be a higher level of language usage than the twins have yet attained. Typically developing children begin asking simple questions such as "what's that" between twenty-four and thirty months. More complex responses that ask deeper "what" questions or that begin with "who" or "where" do not normally show up in a child's speech until between thirty-six and forty-two months. The twins participated in this intervention when they were thirty seven months old. This is the age when questions should just begin to be asked. Since the twins had a one and one-half standard deviation in expressive language, one would not yet expect them to ask questions during the story.

### Recommendations

Early intervention specialists have learned through their training and experience that it is the parent who is the young child's greatest teacher. Therefore, the specialist works not only with the child, but with the parent. The professional offers the parent suggestions, examples, and support as they work together for the benefit of the child. The author envisions using Dialogic Picture Book Reading in two ways. First, it can be used by the specialist as she works directly with the child. Secondly, the specialist can train the parent in the specific use of Dialogic Picture Book Reading. This can be done through direct example as

the specialist works with the child. Papers that detail each of the five adult interactions as well as the five expected child responses should be given to the parents. Training the parents in the methods of Dialogic Picture Book Reading could be tailor made to the needs and abilities of each family.

It has been the researcher's experience that the majority of parents adopt a straight "reading of the text" style of storybook reading with their children. While this particular method may foster some language growth, it has been found that Dialogic Picture Book Reading more specifically fosters advances in verbal expression. The author feels that teaching parents to read to their children by incorporating Dialogic Picture Book Reading principles would result in an increase in expressive language for the children.

#### Implications for Future Research

A recommendation for future research would be to measure the child's length of utterance in a natural setting both before and after the intervention. This would allow the researcher to see if the increase in length of utterance was being generalized into everyday language.

Another recommendation would be to use a larger sample size during the intervention. This experiment used only two students. Young children vary so greatly in their responses to different situations, that results from just two children cannot be generalized to the population at large. A larger sample size would produce more reliable statistics to draw conclusions from.

Extending the length of time that the experiment took place would be an additional recommendation for further research. This intervention took place over a period of five weeks. Two sessions a week were conducted. A study that incorporated Dialogic Picture Book Reading several times a week for a longer period of time would yield interesting results.

There are many possibilities for future research not only in the area of Dialogic Picture Book Reading, but in the broader area of increasing expressive language in young children. It is through research such as this that we can make progress in the field of early childhood language. Hopefully more and more children with language delays will be able to experience full and successful lives because of these studies.

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