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ABSTRACT

This report describes a program for advancing language development across the curriculum through the use of multiple intelligences. The students of the targeted early childhood and kindergarten classes exhibited a lack of conversational skills, a lack of language concepts preparing them for reading, and immature language patterns making it difficult to communicate. The evidence that this problem existed was documented by teacher observations, parent surveys, pretests and posttests, and tape recordings of the students' language. Analysis of probable cause data revealed that many students experienced language and vocabulary problems that later affected their reading and communication skills. Teachers reported an increase in the number of students exhibiting language delays and the vocabulary skills needed for engaged communication. The stimulation of student language has decreased through change in lifestyles, numerous hours of watching television, and inadequate child care. A review of solution strategies suggested by knowledgeable others, combined with an analysis of the problem setting, resulted in the selection of three major categories of the intervention: concentrated units of study with emphasis on language development, small group instruction, and integration of the multiple intelligences in daily lessons. The accumulation and analysis of post intervention results indicated a significant improvement in students' expressive and receptive language with an intense daily intervention using the multiple intelligences. (Contains 38 references and 18 figures of data. Appendixes contain survey instruments, manipulative materials, checklists, and lists of games, books, and songs and finger plays.) (Author/RS)

ENHANCING VOCABULARY AND LANGUAGE
USING MULTIPLE INTELLIGENCES

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Diana Parks
Rita Soldwedel

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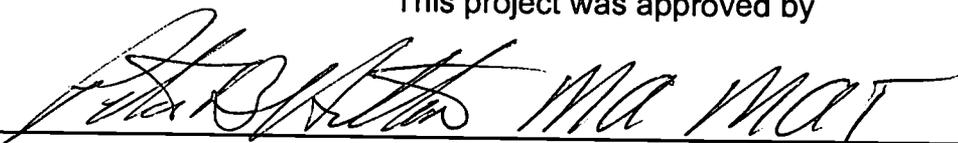
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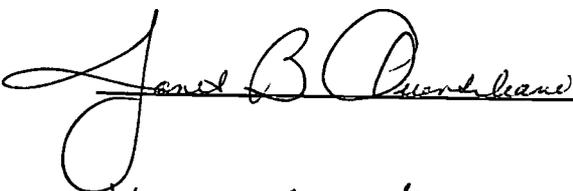
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The accumulation and analysis of post intervention results indicated a significant improvement in students' expressive and receptive language with an intense daily intervention using the multiple intelligences.

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CHAPTER 1

PROBLEM STATEMENT AND CONTEXT

General Statement of the Problem

Some students of the targeted early childhood program and kindergarten class have shown deficiencies in language development, specifically in the area of vocabulary. Weak vocabulary skills make efficient conversation and communication difficult for the students. This immature language processing directly affects all areas of learning, especially reading. Teacher observations, pretest scores, and teacher surveys support the need for professional intervention.

Immediate Problem Context

Local Setting

The research site has developed a mission to foster a nurturing environment conducive to learning where all children are encouraged to reach their full potential. The development of enthusiastic, life long learners is a shared responsibility of parents, students, and staff (Primary School Mission Statement, 1998-1999).

This study was conducted in a kindergarten classroom with the inclusion of the afternoon section of early childhood. The primary building houses kindergarten through fifth grade with a total enrollment of 586 students. The brick facility was built in 1979. While the outside

classrooms have windows, all interior rooms do not. All classrooms are air conditioned and carpeted. There are four sections of each grade level except for second grade which has five sections.

There are forty-three teachers in the building, thirty-nine are female, four are male. One hundred percent of the teachers are White. The racial/ethnic background of the students is 99.7% White and .3% Asian/Pacific Islander. There are no limited English proficient students. The average number of low-income students is 32.9%. Attendance rate is 95.3 % with a mobility rate of 27.2 %. There are no chronic truants. Time devoted to teaching core subjects each day averages 108 minutes of language arts instruction, 60 minutes of mathematics, 25 minutes of social science and 18 minutes of science (School Report Card, 1997-98).

The school offers physical education daily and music two times a week. No formal art instruction is offered. There are numerous special education programs in the building. Early childhood is currently a half day program serving children with separate morning and afternoon sessions. On the average there are two inclusion classes per grade level. There are also two self-contained classrooms and a multiple impaired classroom. Additional support services include occupational therapy, physical therapy, a vision consultant, a hearing impaired therapist, and two full time speech pathologists. The primary building shares a full time psychologist, social worker, full time reading coordinator, and nurse with the rest of the district.

Other programs offered are Title I Math for grades 3-5, Reading Recovery for first grade, a gifted pull-out program for grades 3-5, half-day and full-day kindergarten, and Writing-to-Read for kindergarten and first grades. A latchkey program is also offered before and after school. Instructional methods include: literature based instruction, cooperative learning, reading

improvement, math their way, journal writing, silent reading, and reading incentive. Technology is integrated into the curriculum with six computers in each regular division classroom plus a teacher station with Internet access. The school also encourages the use of technology through its two computer labs, one with Internet access. Activities designed to improve school achievement are based on the analysis of the Stanford Nine Achievement Test given during the 1997-98 school year. The activities consist of journal writing for approximately thirty minutes per week, grade level meetings, building meetings to align local curriculum with state learning standards, and staff development activities to promote improved writing and spelling skills for students.

District Setting

The district was formed eight years ago as a result of the consolidation of three separate districts. It draws from five communities spanning 196 square miles across two counties. The district consists of one primary school, one intermediate school, and one high school. The primary building is comprised of grades pre-K, through five. The intermediate building is comprised of grades six through eight. The high school building houses grades nine through twelve.

The administrative structure of the district is divided into a central office and the building administrators. The superintendent is located in the central office. Each of the three facilities is led by a building principal. The administrative teams meet periodically with building and district leadership teams.

As cited in the 1998 School Report Card, the characteristics of the student body were as follows: 99.2% White, 0.3% Hispanic, 0.3% Asian/Pacific Islander, 0.2% Native American with a

total enrollment of 1,316 students. The district school demographic report states that 28.0% of the students are low income. There is a 94.5% attendance rate with 24.8% mobility rate. There are eleven chronic truants causing the chronic truancy rate to register at 0.9%. The average class size is kindergarten, 21.2; first grade, 25.0; third grade, 25.8 (School Report Card, 1998).

There are 90 certified teachers with an average of 15.9 years of teaching experience; 22.7% of those teachers have a master's degree or above. The faculty is 100% Caucasian with 26.8% male and 73.2% female members. The average teacher's salary is \$33,416. The average administrator's salary is \$55,562. The operating expenditure per pupil is \$5,421 with a total district expenditure equaling \$5,815,411 (School Report Card, 1998).

Community Setting

The community, where the K-5 building is located, is rural with a population of approximately 1,900. The village was formed in 1858 and consists of 110 acres. The railroad played an important part in the growth of this area. This peaceful community has access to several metropolitan areas and is governed by a mayor and six trustees. The town has a police department, volunteer fire department, volunteer ambulance service and is within twenty minutes of the nearest hospital. Several schools of higher education are approximately sixty miles away. There are two preschool programs offered to community members. There are two banks, a pharmacy, two convenient stores, two gas stations, three restaurants, one grocery store, a flower shop and nursery, two doctor's offices, and several other small businesses. A small library is also available to members of the community. The library has received grant money and is in the process of planning a new building.

Recreational opportunities available to local residents are boys' baseball, boys' and girls' basketball, boys' and girls' soccer, men and women's softball, girls softball, youth wrestling, and a public pool. There are several campgrounds located within five miles of the town. A national wildlife refuge and a fish hatchery are attractions to the area. A number of civic organizations within the community include the Chamber of Commerce, Economic Development Council, American Legion, Optimist Club, Rotary, Jr. Women's Club, Historical Society, Eastern Star, and a major festival association. There are more than a dozen churches in the area meeting the needs of many diverse religions.

The median family income in the community is \$37,290 with the average home selling for \$65,000. There are numerous employers in the area with the largest percentage being in retail trade. The average age of a citizen in this small community is 36.7 years. Approximately 75% of the residents have a high school diploma while 28.6% of those same residents have extended their education (Community Profile, 1997).

National Context of the Problem

Today, some children come to school so delayed in their language that it is hard for them to understand directions, gain pre-reading skills, and communicate effectively. "In our bustling society, opportunities for direct communication and intimacy are increasingly precious, and we might get out of the habit of careful listening and observing" (Wilford, 1998, p. 54). Parents who sit down and take the time to communicate with their children are decreasing in number. Parents are becoming more dependent on television and video games to entertain their children. This has caused many children to become under stimulated in language. "Achievement drops sharply for children who watch more than ten hours of television a week, or an average of more than two

hours a day” (US Department of Education, Reader’s Digest, June 1997, p. 1). According to the November 1998 issue of Education Week, the average child between the ages of nine and twelve reads approximately one hour and eighteen minutes per week, as opposed to watching television for thirteen hours and seventeen minutes per week.

Many parents fail to realize the importance of talking to their children. “It’s crucial to recognize that you have a particular capacity to help children’s language development just by talking to them, by listening to them, and by developing the expectation that there will be real conversations going on during the course of your day together” (Snow, 1998, p. 58). According to psychiatrist Janellen Huttenlocher of the University of Chicago, the more words children hear, the faster they learn language. “Infants whose mothers spoke to them a lot knew 131 more words at 20 months than did babies of more taciturn, or less involved, mothers; at 24 months, the gap had widened to 295 words. There is a huge vocabulary to be acquired and it can only be acquired through repeated exposure to words” (as cited in Begley, 1996). The intricacy of language development is illustrated very clearly by the following quote: “Hearing the sounds in words builds a neural circuitry which absorbs in a way that is similar to creating a computer file” (Begley, 1996, p. 54).

Another aspect of the problem is the change over time in literacy in this country. “Preschool is the right time to begin serious language and vocabulary development,” said Marilyn J. Adams, a professor of education at Harvard University and a member of the National Reading Council panel. (Manzo, 1999, p. 2) However, many “child care workers, some 40 percent, have no more than a high school diploma. Traditional care taking, such as keeping children safe, fed, and clean, is often the main focus. Yet, many of these children are in special need of early

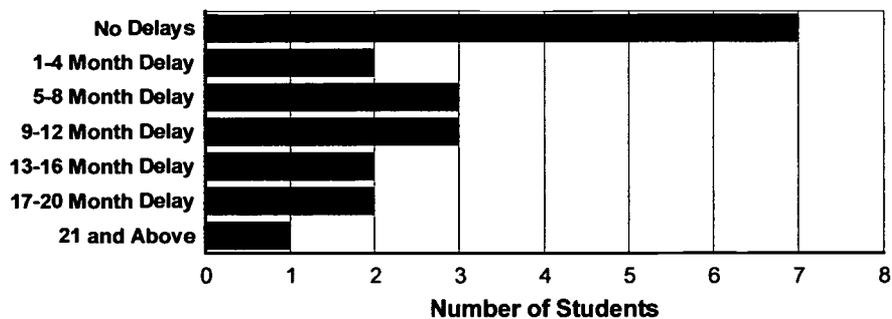
language stimulation and literacy learning” (Manzo, 1999, p. 1). Are parents reading to their children? A lot of research compiled in the last twenty years confirms that the best way to raise a reader is to read to that child every night. It is important that the parents themselves are literate. But are they? “More than twenty percent of adults read at or below a fifth-grade level—far below the level needed to earn a living wage. The National Literacy Survey found that over forty million Americans age 16 and older have significant literacy needs” (National Institute for Literacy, Education World, 1997, p. 1).

We, as educators, need to be very concerned with the extent of this problem in our nation. The lack of family communication and literacy have had an adverse impact on our children’s early years. By the time children reach school age, many are already behind in their language development. Their vocabulary is underdeveloped to the extent that it makes it difficult for them to express themselves, connect thoughts, and be ready to achieve in school.

CHAPTER 2
PROBLEM DOCUMENTATION
Problem Evidence

The evidence to document language usage was collected through teacher surveys (Appendix A) (Appendix O), parent surveys (Appendix B) (Appendix P), and student standardized pretests. The assessments were given over a two week period. Students from the targeted classrooms were given two standardized language tests. Researchers' predictions were verified by pretest results indicating 70% of the targeted kindergarten and early childhood students were language delayed in some area. Some students were delayed in their expressive language, while other students were delayed in their receptive language.

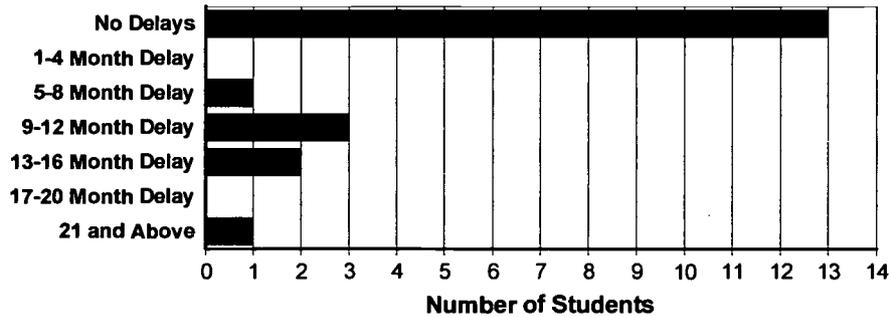
Figure 1. Expressive Language Delays (K-Seals)



In the K-Seals pretest of the targeted twenty students, there were seven students who showed no expressive language delays. The remaining thirteen students showed delays ranging from one month to twenty-seven months. (Figure 1)

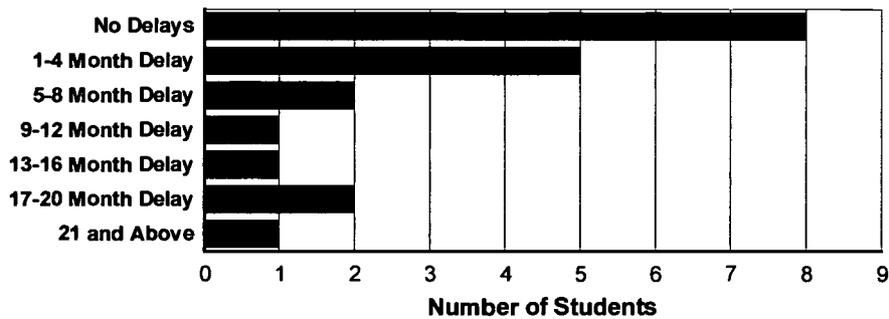
In the One Word Picture Vocabulary pretest, thirteen students showed no expressive language delays. The remaining seven showed delays ranging from one month to twenty-four months. (Figure 2)

Figure 2. Expressive Language Delays (One Word Picture Vocabulary)



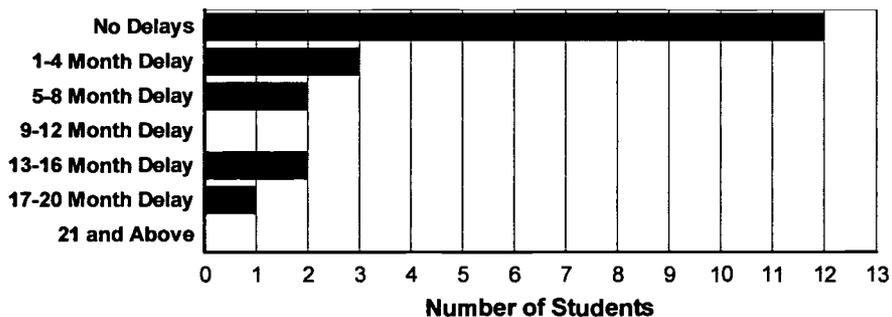
An area that is just as important as expressive language is receptive language. In the K-Seals pretest of the targeted twenty students, there were eight students who showed no receptive language delays. The remaining twelve students had delays ranging from one month to thirty-three months. (Figure 3)

Figure 3. Receptive Language Delays (K-Seals)



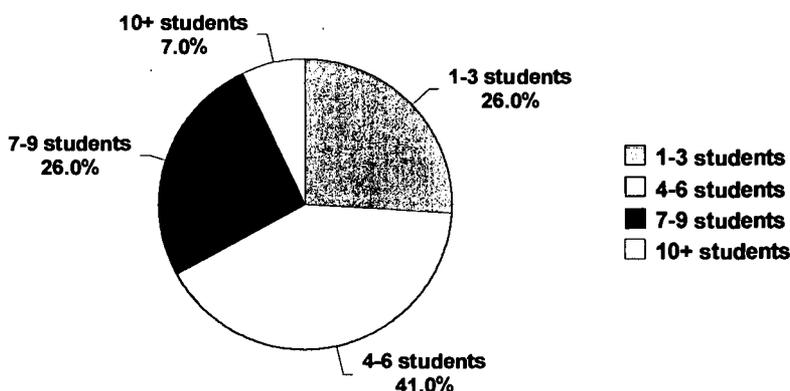
In the One Word Picture Vocabulary pretest of the targeted twenty students, twelve students showed no receptive language delays. The remaining eight students showed delays ranging from one month to nineteen months. (Figure 4)

Figure 4. Receptive Language Delays (One Word Picture Vocabulary)



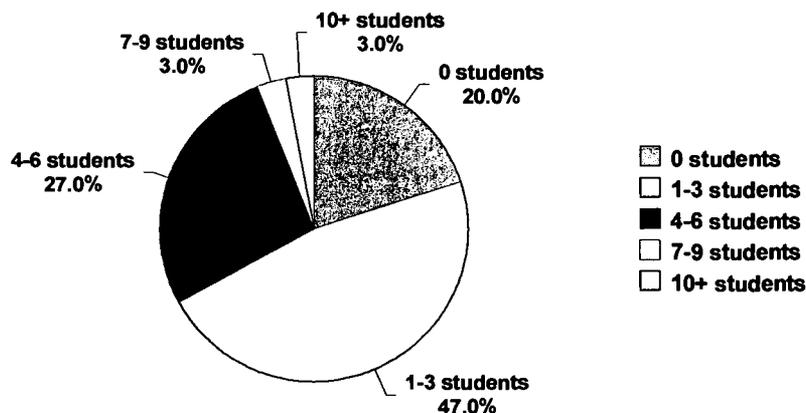
In order to determine the impact language deficiencies have on children throughout the building, all teachers were surveyed. A total of thirty surveys were returned. Expressive vocabulary is important in naming objects or pictures, retelling a story, expressing emotions, or describing something. The teachers were asked, “How many children in your classroom have difficulty expressing themselves?” All of the teachers surveyed reported that they did have students in their classrooms who had problems expressing themselves. Forty-one percent indicated they had four to six students with difficulties. Researchers noted that 26% of the teachers surveyed responded that seven to nine students in their classrooms have deficits in the area of expressive language and another 26% of the surveyed teachers have one to three students with difficulties. Only 7% reported that they have ten or more students with problems expressing themselves. (Figure 5)

Figure 5. Teacher responses to the number of students having difficulty expressing themselves in the classroom.



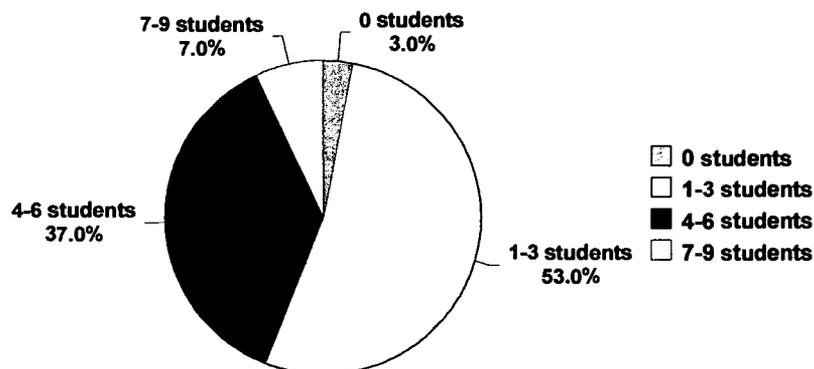
Another concern involving language deficits is students not speaking in complete sentences. The survey revealed that 47% of the teachers thought one to three students in their classroom had difficulty talking in complete sentences. Twenty-seven percent of the responding teachers reported that they had four to six students having problems talking in sentences, 3% of the teachers had seven to nine students, and another 3% had ten or more students who did not talk in complete sentences. Twenty percent of the teachers reported that all of their students talked in complete sentences. (Figure 6)

Figure 6. Teacher responses to the number of students having difficulty talking in complete sentences in the classroom.



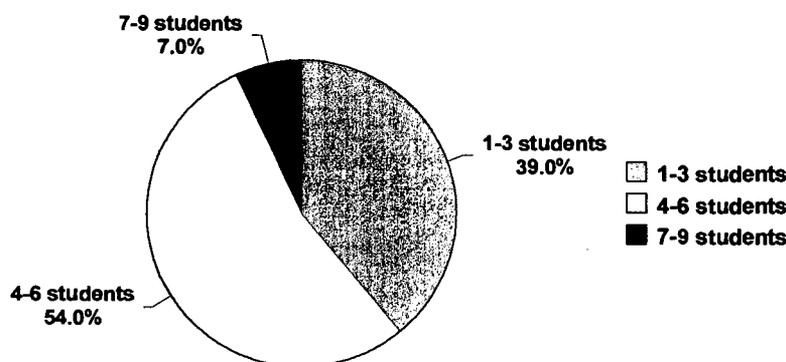
When many children reach school age, they are already behind in their language development. Their vocabulary is underdeveloped to the extent that it makes it difficult for them to express themselves, connect thoughts, and be ready to achieve in school. Researchers felt it was important to discover how many students were having trouble in the area of vocabulary. Fifty-three percent of the teachers surveyed had at least one to three students in their classrooms who did not know basic vocabulary words. Another 37% of the teachers had four to six students, while 7% indicated that seven to nine students did not know basic vocabulary words. Only 3% of the surveyed teachers responded that all of their students came to school this year with a good, basic vocabulary. (Figure 7)

Figure 7. Teacher responses to the number of students in their classrooms who do not know basic vocabulary words.



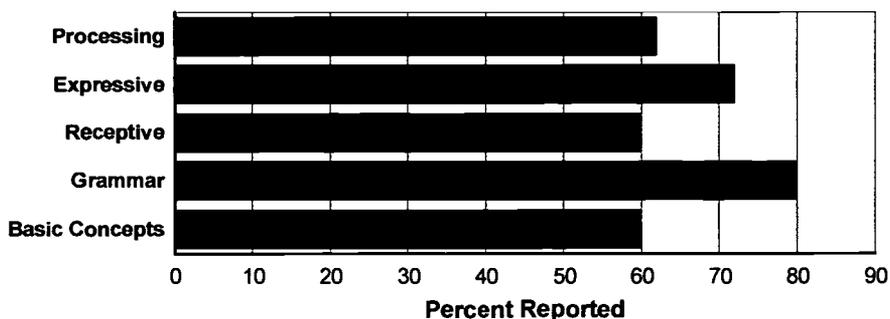
Because of the huge impact the home environment has on language delays in young children, researchers were concerned over the actual number of students per classroom that teachers suspected of having language delays. The following graph reflects a broader view of the problem and its influence in the classroom. (Figure 8)

Figure 8. Teacher responses to the number of students per classroom suspected of having language delays.



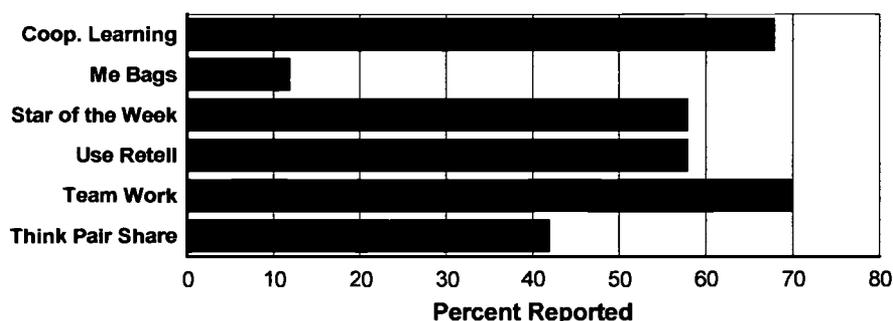
Researchers needed to find more information about specific areas of language deficiencies before planning their intervention. Teachers reported the types of delays in language according to the categories of processing, expressive, receptive, grammar, and basic concepts. Sixty-two percent of the teachers reported that some of their students had a processing deficiency. Seventy-two percent reported they noticed expressive language deficiencies. Sixty percent reported they noticed receptive language deficiencies. Eighty percent of the teachers reported their students had a deficiency in grammar. Sixty percent reported they had noticed students in their classroom with deficiencies in basic concepts. (Figure 9)

Figure 9. Specific language deficiencies as observed by teachers.



Curriculum plays an integral role in the development of a child's language. Researchers had a concern about the type of teaching strategies used in the classroom. The teachers were asked what activities were used to promote verbalization. According to the survey on teaching strategies, many teachers reported using numerous language stimulated activities in the classroom. When teachers were asked to check appropriate activities they used in their classroom, the two most frequent responses were cooperative learning and team work. As figure 10 shows, other strategies often used in our building include star of the week, retelling of stories, and think, pair, share.

Figure 10. Strategies teachers use in their classrooms.



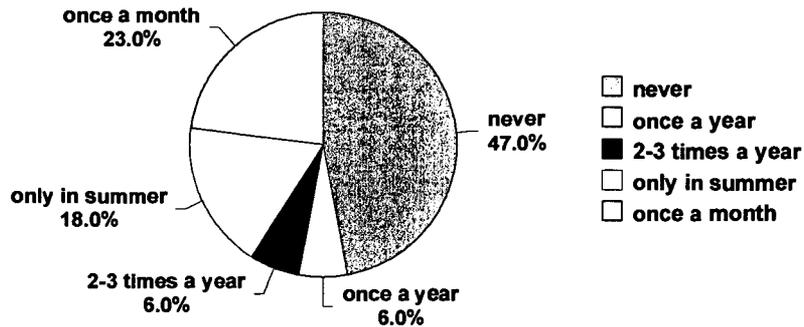
Parents were also surveyed to determine the types of language activities they used with their children at home. Researchers found quite a discrepancy between the parent surveys and the pretest results. Seventy percent of the students tested were language delayed in the areas of expressive, receptive, or both. Yet, 41% of the parents reported having read to their children daily for fifteen minutes or more. The least amount of time they read to their children each day was five minutes. No parent reported not reading to their child each day. Ninety-four percent of

those same parents reported that they talked to their children about the story and the picture names. Only 6% of the parents said they didn't talk about the story with their child.

Another inconsistency researchers found in the parent survey as compared to the test results was that 71% of the parents stated that they always talk to their children in an adult manner. No parents felt that they did not use adult language with their children. Eighty-three percent of the parents indicated that they spent two or more hours each day talking to their child. No parents reported talking less than forty-five minutes per day. One hundred percent of them said that they talked with their children about their school day. A problem with the discrepancy between the parent survey and pretest results may have been due to a lack of communication between the researchers' intent of the questions on the survey, and the parents' interpretation of the actual questions.

The only parent survey question that the researchers selected to illustrate and support the probable cause for the large number of language delays in these targeted students was the frequency of visits to the library. Forty-seven percent of the parents reported that they never took their child to the library. Six percent reported that they took their child to the library once a year. Another 6% reported that they took their child to the library two or three times a year. Eighteen percent reported that they took their child to the library only during the summer. Twenty-three percent reported that they took their child to the library once a month. (Figure 11)

Figure 11. Frequency of library visits as reported by parents.



Probable Causes

A review of the literature suggests that there are a variety of causes for language delays in young children. Three of the most prominent factors include home environment, social/cultural experiences, and school instruction. The use of language is a very unique process to each child. Knowledge has to be reconstructed based on each individual learner's prior knowledge. The student must make sense of the new learning based on what he/she already knows (Wells & Chang-Wells, 1992). A great deal of language formation occurs before the child enters school.

Brain research emphasizes the importance of stimulating brain neurons at critical times in a child's development to open the basic circuits of language and priming a baby to turn sounds into words. It has been proven that at six months of age infants have already formed auditory maps (Begley, 1996). In this respect, one of the most important differences in children's language depends on the amount of conversation that the child has engaged in with an adult. If the adult provides effective support for language learning and responds to the child's approximations, the child has optimal opportunities to learn language (Wells, 1986). This is where the home environment plays such a huge role. A lot depends on the philosophy of the parents in raising

their children and the importance they attach in contributing to their child's development.

Obviously, the language development of a child raised in a home where only basic needs are met will be quite different than that of a child who is actively engaged in conversations dealing with stimuli inside and outside the home on a daily basis. Toddlers learn how precious their ideas and words are through rich conversations with adults (Honig, 1998).

Many families today consist of either a single parent or two working parents. Parents have less time to talk, question, and interact with their children. Researcher Catherine Snow emphasizes the importance of dinner time conversations and its impact on language development and reading achievement (Mikulecky, 1996). In today's busy family, it is difficult to even get the entire family around the table once a day. Overworked parents are often tempted to place children in front of the TV set in order to catch up on necessary chores. There is a sharp drop in academic achievement when children watch more than ten hours of television a week (Family Involvement Partnership for Learning, 1997). "Ninety-eight percent of the homes in America have a television set and that set is on for an average of seven hours and one minute a day" (Trelease, 1989, p. 4). These statistics reveal to us the number of hours our children are not expanding their language skills or communicating with significant others.

Those same busy families may have their children enrolled in preschool or daycare. This raises the issue of what type of activities these young children are exposed to during these important years of language formation. The main focus of many daycare workers is to keep children fed and safe. They have received little, if any, training in promoting language stimulation or providing the foundation of early literacy learning. Many times these staff members give children lots of love

and attention but they are not professionally trained to create a language rich environment (Manzo, 1998). The child care profession may require closer scrutiny from educators and policy makers since it plays such an important role in early literacy.

Research does not single out social class as a primary contributor to a child's limited use of oral language. Many students from low income families can be very successful in language usage. Research does suggest, however, when lower class children suffer from linguistic disadvantage, it perhaps comes from a cycle of parenting where the parents found it difficult to read and write when they were in school. They were put in remedial programs, felt unsuccessful, and left the educational system as quickly as possible. These same parents qualified for jobs that required only minimal reading skills. Because they do not enjoy reading and writing activities, their children come to school as disadvantaged as their parents once were (Wells, 1986). Conditions under which these children are assessed also can put them at a disadvantage in our educational systems. Slow progress children are not less able, they just lack the relevant experience. This is also true with the cultural biases that lie in evaluating a student's oral language. The non dominant cultures are increasing rapidly in the United States. Yet the financial support for bilingual programs in our country has dropped from 47% to 8% (Smiley & Goldstein, 1998). There is a lack of support and training of teachers to accelerate the language development of these students.

The instruction that occurs in school is another factor in the students' language development, and one that we can influence to a greater degree. Progress in a child's language can be remarkable when gaps in experience are filled and curriculum is matched to the needs of the individual students (Wells, 1986). But are we truly meeting the needs of language delayed young

children? Most information in the classroom is still transmitted through classroom recitation where the teacher talks and the students listen (Nystrand, 1997). Too many times teachers ask questions with predetermined answers. They need to ask questions that help children express how or why, requiring them to use language in new ways (Snow, 1998). Time needs to be allowed to make sure that children are doing most of the talking (Church, 1998). Due to the large number of students in some classes, this becomes difficult because of classroom management issues. It is difficult, if not impossible, for the teacher to spend one-on-one time with the students engaged in meaningful dialogue (Wells, 1986).

The standardization of our curriculum contradicts the theory of making students' learning and language expansion meaningful and relevant. Children are expected to learn the "basic skills" with the learning process broken down into small self-contained steps. The students lose sight of the whole picture through this uniform progression of learning. The students do not see a connection between the various topics and are not given the opportunity to use language in planning and pursuing the learning that makes sense to them (Wells, 1986). The Reading Recovery program speculates that if oral language competency is identified and given special attention in a consistent way, children can really accelerate their progress in both reading and writing (Literacy Teaching and Learning, 1996).

The mainstay of Howard Gardner's theory of the multiple intelligences is the realization that any discipline (in this case, language development) can be taught in more than one way. He stresses the importance of educators being persistent and imaginative in order to help students achieve at a higher level (Checkley, 1997). Gayle Merrefield claims that the multiple intelligences can particularly benefit preschool children with language problems. "Although special educators

do need to identify the failings and weaknesses of students, they should also celebrate and capitalize on alternative forms of smartness” (Merrefield, 1997, p. 58). The multiple intelligence theory needs to be implemented in more classrooms across the United States.

We must be careful that the opportunities for direct communication are provided for our children in the home and school environments and that provisions are made for their different social/cultural experiences. Students need our careful listening and observing in an individual or small group setting (Wilford, 1998). They require literacy learning and early language stimulation.

CHAPTER 3

THE SOLUTION STRATEGY

Literature Review

Oral language incorporates the ability to understand spoken language (receptive language) and the ability to express ones' thoughts (expressive language). In order to be an efficient language user receptively and expressively, a student needs to develop skills in the areas of vocabulary, sentence structure and grammar, conversational skills and more (Bucks, 1995). We can discover the nature of the knowledge that a student possesses by studying his/her language. "I still remember the excitement I felt when I first read Chomsky's claim that 'language is a window on the mind' "(Wells, 1985, p. ix). Language facilitates the ability of students to communicate through purposeful talk, understand their world, and eventually acquire literacy. A student's language knowledge and his/her ability to apply that knowledge are fundamental to learning as children participate in school curriculum, interact with peers and adults, and acquire knowledge and content (Merritt & Culatta, 1998).

Expanding Language Through the Multiple Intelligences

Learning language is a complex process and we plan to accelerate the students' language acquisition through the use of the multiple intelligences. We, as teachers, recognize that learning

is a living process requiring many adjustments to suit many different individuals and their ways of learning. “Teachers have to help students use their combination of intelligences to be successful in school, to help them learn whatever it is they want to learn, as well as what the teachers and society believe they have to learn” (Checkley, 1997, p. 24). By focusing on how the students learn, the use of all eight intelligences will engage the students strengths and stimulate their language development (Appendix C). “In the preschool and early elementary years, instruction should emphasize opportunity. It is during these years that children can discover something of their own peculiar interests and abilities” (Gardner, 1993, p. 29). Remediating language delays in children is important to prevent other problems that could occur in language development. There is a need to incorporate this into a classroom intervention and evaluation (Smiley & Goldstein, 1998).

Addressing Student’s Multiple Intelligences

The Chinese proverb that questions whether it is better to give a man a fish for today or teach him the art of fishing to prepare him for a lifetime certainly applies to teaching through the multiple intelligences in education today. Researchers believe that a shrewd educational intervention can and will make a great deal of difference for human progress and success. “The human brain has a very large unused potential which some authorities have assessed at 90 percent. The job of education is to realize this unused potential” (Gardner, 1983, p. 368). The good news about teaching with the multiple intelligences is that it can be used every day in curricula that we are already teaching (Lazear, 1991). (Appendix D)

The traditional curriculum in language development does not address the students’ multiple intelligences. The student who is verbal linguistic performs quite well in the language

area. Not all students are able to learn in this way. By using alternative multiple intelligences, the students may be given other routes to achieve advancement in their language skills. “While some individuals are ‘at promise’ in an intelligence, others are ‘at risk’ ” (Gardner, 1993, p. 29). When the multiple intelligence theory is used, the teaching and learning activities become student centered rather than teacher centered (Vialle, 1997). The student encompasses a deeper, richer, and more varied approach to improving learning and expanding language skills (Christison, 1996).

Students with poor verbal skills need to be motivated by a wide assortment of learning opportunities. According to Chapman (1993), the musical/rhythmic child may make gains in language concepts through the use of song, chants, raps, rhythms and finger plays (Appendix E). The bodily/kinesthetic child would respond to language through his/her use of the body to express ideas and feelings and to solve problems. The visual/spatial child might express his/her understanding of a story through graphic organizers, art, or grids. The logical/mathematical child could verbalize about putting things in categories, experiments, or completing logic puzzles and games. The naturalist may increase language skills through the description of the inside of a carved pumpkin or by talking about how he/she categorized leaves by shape and color. The interpersonal child could enjoy verbalizing concepts with his/her cooperative group, sharing board games, or working on a project with a team member (Appendix F). The intrapersonal child benefits from an oral self-evaluation or by reflecting on his/her own attitudes and beliefs. While utilizing a favored intelligence, the child is in his or her comfort zone and may be more willing to talk during and about the experience.

The procedure of creating a new curricula by using the multiple intelligence theory as an organizing framework helps to transfer material from one intelligence to another. Educators can

address any skill or content area by offering daily, weekly, or monthly units, instructing the students in such a way that all intelligences are addressed (Armstrong, 1994). The way to be most effective as a learning facilitator is to understand the different strategies needed for different learners and to keep changing what you are doing until it works (Jensen, 1988). These theories suggest that by tapping into each child's strengths, his/her weaknesses can be improved.

The vision of expanding a student's receptive and/or expressive language hinges on the individual's specific strengths, and balancing those strengths with opportunities to develop all the skills that he/she needs. Multiple intelligence units should foster integrated curriculum, problem-based learning, higher-order thinking, cooperative learning, authentic assessment, and other strategies that are interactive (Burke, 1999). Connecting the classroom to the real world through thematic learning aligns the process of learning to the way the human brain is designed to learn (Jensen, 1995).

Targeted Skill: Vocabulary

Language development is critical in the first five to seven years of life (Hamaguchi, 1995). A child may be delayed in either the expressive language or receptive language. Expressive language involves the ability to create a spoken message that others can understand. Some indications of an expressive vocabulary problem can be observed when a child has difficulty naming objects or pictures, retelling a story, expressing emotions, or describing something. Students who have a vocabulary deficit usually use vague terms instead of specific words. An example of this might include students past the age of four using baby talk to refer to people and objects. Receptive vocabulary refers to all the words a child understands. It is probably one of

the most important language skill areas. Difficulty in the area of receptive vocabulary can have a serious impact on a child's academic achievement.

There is a definite relationship between language deficits and learning to write, read, and spell. There is a risk for children with developmental language disorders to experience problems in literacy (Merritt & Culatta, 1998). This is why an intervention is so important. Teachers need to broaden the range of children's experiences in order to help them develop deliberate attention to a topic that makes systematic language learning possible. This concentrated effort helps the students to be more aware of what they know so they can take over the responsibility for their own learning (Wells, 1986). Children who have delays in language need to have the opportunity to engage in purposeful conversation in a collaborative and non threatening environment.

Part of the intent of the intervention is to use a lot of "read-aloud" stories with the children as we explore their world through the multiple intelligences and thematic units (Appendix G). The purpose of this is to build a richer vocabulary in students by having them listen and interact with the story as well as develop a sense of story. They learn to use past tense and gain a sense of prediction as to how particular characters will act in a story. In the process of hearing a story read or sung, children develop a language and literacy set (Deford, Lyons & Pinnell, 1991).

It is meaningful for children to be taught language in context. Many times classroom environments present new concepts through pictures or print examples rather than using the actual item or illustrating the action (Smiley & Goldstein, 1998). This makes it difficult for children with limited language. It is one of the goals of this intervention to make the learning concrete. Hands on learning will be encouraged in a setting where standard language productions

are modeled and reinforced. With less teacher talk the individual students have more frequent and more substantial opportunities to contribute to classroom interaction (Wells & Wells, 1992).

Because their language problems could adversely affect them academically and socially, language intervention is necessary for students with deficits. It improves not only the child's vocabulary and language functioning, but also enhances development of problem solving, social outcomes, and information storage and retrieval (Smiley & Goldstein, 1998). Kindergarten programs should emphasize oral language and writing as well as the beginning steps in reading" (Report of the Commission on Reading, 1985, p. 57). Concepts of printed language are built through the facilitation of the students oral language.

Targeted Skill: Grammar

Grammar involves the semantic function of nouns in relation to verbs. Many kindergarten children have difficulties with the present and past tense of verbs, correct usage of pronouns, and/or the use of complete sentences when they talk. It is not expected that children of this age master such linguistic concepts, yet the grammar skills will be an integral part of the book knowledge needed as a first grade reader.

Many social factors affect a child's grammatical development such as a child's position in the family, a child's preference for interacting with siblings, sex of the child, educational level of family, and social class (Wells, 1986). Grammar is an expressive language problem. Many parents think children will automatically outgrow their syntax and morphology difficulties, but if children do not get the right kind of help at the right time they may not grow out of their language delays (Hamaguchi, 1995).

It is the goal of this intervention to use high interest activities to promote lots of language usage. As this verbalization occurs, the teachers will mirror the child's language to let the student know that his/her message has been received and at the same time respond by rephrasing what was said by using the correct words and sentence structure (Smiley & Goldstein, 1998).

The stories that are read aloud should also provide an excellent model of language for the students. These stories expose the children to "good grammar and the English language spoken in a manner that is distinctly different from that in television sitcoms or MTV" (Trelease, 1989, p. 16).

Most children can overcome grammatical problems with the appropriate modeling and therapy. The importance of this issue becomes clear as a child communicates with other children and begins his/her academic pursuits. "As children begin to learn to write sentences and stories in school, they need to rely on that 'inner voice' we all have to decide which words to write and how to write them. Children who have difficulty internalizing language rules for speaking may also have problems with other language rules needed for reading and writing" (Hamaguchi, 1995, p. 118).

Project Objectives and Processes

The action plan was developed to enrich language and vocabulary by using multiple intelligences. The intervention began September 7, as week one, and ended December 17, completing 15 weeks of instruction. The intervention was implemented for one half hour daily with a total of 54 lessons. It was expected that the kindergarten and early childhood students would increase their vocabulary and language skills as measured by two standardized tests. (K-Seals Kaufman Survey of Early Academic Language Skills and the Expressive, Receptive

One-Word Picture Vocabulary Test) The teacher researchers targeted 20 students for the intervention.

All teacher researchers taught the same group of 20 students. The students were divided into two or three groups each day and assigned to a separate instructor for each group. The groups then met in separate rooms to allow plenty of space for the students. This helped to make it more conducive to the use of the multiple intelligences. It was the goal of the intervention to incorporate all of the multiple intelligences each week into the lesson design focusing on language acceleration.

In order to accomplish the project objectives, the following processes are necessary:

1. A list of language activities incorporating multiple intelligences strategies was developed.
2. Manipulative materials were gathered and constructed (Appendix H).
3. Surveys for teachers, parents, and students were developed and administered.
4. Pretests, posttests, and an accompanying checklist for the teachers' use were developed.
5. Tape recordings of the students' language were listened to and evaluated by the teacher researchers.

For the children to achieve the stated improved language skills, the following action plan was developed.

Project Action Plan

I. Before school begins

- A. Send letter to parents and include project information
- B. Administer parent survey
- C. Solicit parent consent for students to participate in the project

II. Week 1

- A. Administer student pretest (5 days)
- B. Parent meeting to discuss the project

III. Week 2 **About Me**

- A. INTRA M/R B/K M/L Using paper plates make a picture of themselves, using yarn or ribbon make hair on the paper plate. Action songs: “Head, Shoulders, Knees and Toes”, “Ten Little Fingers”. Play Body Hop Scotch using bean bags teaching numbers and body parts.
- B. INTRA NAT V/S Read aloud Quick As A Cricket. Use markers to draw the animal they are most like. Make a class book.
- C. INTER M/R B/K Song: “Willoughby” Use each child’s name in the song.
Song: “Rock Around The Clock” Talk about what each child did that day.

IV. Week 3 **Family**

- A. V/L NAT Take students outside read and discuss the book Who’s Mouse Are You. Song: “Where Is Thumpkin”.
- B. INTRA M/R B/K Read and discuss the book New Baby. Match mom animal with baby animal. Talk about conflicts with brothers and sisters.

- C. INTER M/R B/K Read aloud *Me Too*. Song: “Five People In My Family”.
Dress up and pantomime family members. Make yourself tall/small activity. Finger play “See My Family”.
- D. INTRA V/L V/S Discussion of who is in their families. Make finger puppets of members of their own family. Introduce their family to other children in children in the class. Finger play: “See my family”.
- E. M/L V/S Song: “Talk Talk Talking On The Telephone”. Ask each child how many times to ring the telephone, they answer and hold a conversation.

V. Week 4 Bugs

- A. M/R B/K V/L Read and discuss book, *The Honeybee and the Robber*. Action songs: “Bumble Bee” and “Inch by Inch”.
- B. INTRA M/R B/K Action songs: “Bumblebee”, “Itsy Bitsy Spider”. Act out “The Ants Go Marching One By One”. Pretend to be bugs and talk about why they chose to be that bug.
- C. INTER M/L V/S Overhead of spider. Four legs on each side-eight legs together. Make spider hats with four legs on each side in a group.
- D. INTER V/L V/S Read aloud *The Very Busy Spider*. Yarn toss calling children’s names, saying a kind word and creating a web. Game with insect cards: “Spider, Spider what do you see?”
- E. V/L NAT Read: *Itsy Bitsy Spider*. Each child got a bug sticker and talked about their bug. They placed it in a sticker book of nature.

VI. Week 5 Colors

- A. NAT V/L Take a walk outside and look at all the colors. Talk about what we saw and what colors they were. List items on the board. Action record: The Circle Game.
- B. INTER M/L B/K Read and discuss book: White Rabbits. Game: Carrying out two commands on a color cue. Example: Blue beads, stand on your tiptoes, and then clap your hands.
- C. INTRA INTER M/R V/S Read aloud Brown Bear, Brown Bear. Discuss large pictures and strange colors for animals. Paint their own strange, large animal. Make a class book: "I see a— looking at me". Play music while painting.
- D. INTRA INTER B/K VS M/R Create human graphs based on their favorite color. Graph it on chart paper. Game: Musical colors.
- E. M/L B/K Songs: Green Green (the students stand when they hear their color), Baby Beluga and the Rainbow of Colors. Talk about the size of a whale compared to other animals.

VII. Week 6 Shapes

- A. M/R V/S Action song: "How Many Ways". Matching shapes, cut out shapes from construction paper and match.
- B. INTRA M/R V/S Sing: Shape rhymes. Make shapes in shaving cream.
- C. B/K M/L Fishing game. Children can keep their catch if they can identify the shape and number of shapes on their fish. Copy shape patterns by gluing toothpicks on a card.

- D. INTER B/K V/L Shape Bingo. Put items of different shapes in a box. A child describes by shape what is in the box. Students guess mystery item.
- E. V/L NAT Read: Goldilocks and the Three Squares. Each child picks a shape and talks about where it might found in nature or around the room.

VIII. Week 7 Fall

- A. B/K B/L Read and discuss book, Clifford's First Autumn and the story Old Oak Tree. Have the children do the actions to the story.
- B. B/K V/L Read and discuss the book, The Autumn Story. Read the story The Scarecrow while putting a scarecrow together.
- C. INTER NAT V/S Pumpkin in paper bag. Children guess what is in bag by asking "yes", "no" questions. Carve pumpkin, remove seeds, seed art.
- D. INTER NAT V/S Basket of leaves. Each child takes one leaf. Categorize by color. Graph colors.
- E. M/R M/L Talk about the four seasons and ask the students what they like to do in each. Do Halloween songs with numbers.

IX. Week 8 Halloween

- A. INTRA B/K V/L M/R Read aloud: The Haunted House. Game: Who is in the Haunted House? Flashlight, Flashlight, Where Are You?
- B. INTER NAT V/S M/L Make balloon spiders.

X. Week 9 Animals

- A. M/R B/K Action songs: "Farmer in The Dell", "Kicker Kangaroo's Tune" and "Sammy".

- B. INTER M/R M/L Songs: “Grandmother’s Song” and “Old McDonald”. Talk about favorite animals and why they are their favorite animal. Graph favorite animals.
- C. B/K V/L Picture cards of farm animals. Match and stamp farm animal in proper place in picture. Animal sounds. Farm animal riddles.
- D. NAT V/S Use stick puppets to act out “Old McDonald Had A Farm”. Each student gets a sticker and gives clues to help other students guess what animal.
Song: “Down By The Bay” (show pictures)

XI. Week 10 Pets

- A. INTRA V/L B/K Read aloud: Who Will Be My Mother? Pocket chart: match mother animal with baby. Game: Act like an animal.
- B. INTRA V/L NAT Children use puppets to portray their pets at home.
- C. M/L V/S Make a cat puppet. Talk about cats and why they like or dislike cats and who has cats at home.
- D. INTER M/L V/S Match pets to their homes. Action book Going on Bear Hunt.
- E. B/K M/R Have each student tell about their pets at home. Song: “Bingo” and “Old Blue”.

XII. Week 11 Transportation

- A. V/L VS Action Songs: Wheels On The Bus. Put wheels on a school bus. Talk about bus safety.
- B. INTRA V/L NAT Read and discuss book: Train. Pretend to be a train. Talk about where we would go if we were the conductor.
- C. INTER M/R B/K Read aloud: Flying. Make new lyrics from “Wheels on the

Bus” to “Wings on the Plane”. Prepare axle snacks in groups. Game:

Transportation pictures.

- D. M/R B/K Play transportation songs while children cut out vehicles. Place on yarn road. Transportation feely box.

XIII. Week 12 Thanksgiving

- A. INTRA M/L B/K V/S Hand turkeys.
- B. INTER M/R B/K V/L Make a please and thank you train. Read and discuss book: My First Thanksgiving.
- C. NAT M/R Song: “I’m A Little Turkey”. Talk about what the students would like to eat for Thanksgiving.

XIV. Week 13 Food Thanksgiving

- A. NAT V/L Different foods are placed in bags. Blindfolded students tell what it is.
- B. INTRA B/K V/S Students draws the best meal he/she has eaten. Tell about it.
Read aloud: The Little Mouse, The Red Ripe Strawberry and The Hungry Bear.
Students pantomime how Mouse feels and acts.
- C. M/R V/L Identifying the name of a food after hearing a riddle about it.
Discriminating between absurd inappropriate questions about food. Action songs: “I’m A Little Teapot and the Pizza Hut song”.
- D. M/L B/K Count and graph M&M’s.
- E. M/R V/S Song: “Peanut Butter”. Talk about what he/she ate for lunch.

XV. Week 14 Christmas

- A. INTRA V/S B/K Make a Christmas tree the child would like to have at home.

Glue cereal or macaroni onto tree.

- B. INTER V/L NAT Gift box: describe in complete sentences toy that is inside. Cooperative groups: Smells of Christmas. (Identify smells from cotton balls)
- C. M/R M/L Read the Twelve Cats of Christmas. Songs: “Rudolph the Red-Nosed Reindeer”, “Santa Claus Is Comin’ To Town”, and “Jingle Bells”.

Methods of Assessment

In order to assess the effects of the intervention, the following tools and procedures were followed:

1. Pre Tests—To measure growth in language according to the following standardized tests:
K-SEALS, One Word Receptive Test, One Word Expressive Test
2. Weekly Reviews—Collaborative discussion based on observation of students
3. Checklists—Generated checklists used to track student progress in language
4. Multiple Intelligence checklists—To help researchers determine that the students are having the opportunity to use all of their intelligences (Appendix J)
5. Mid-term Reviews—Tape recording of child’s language through the use of high interest questions
6. Post Tests—To measure growth in language according to the following standardized tests:
K-SEALS, One Word Receptive Test, One Word Expressive Test

CHAPTER 4

PROJECT RESULTS

Historical Description of the Intervention

The objective of this intervention was to improve language and vocabulary skills in the targeted kindergarten and early childhood students. In order to accomplish this objective, teacher researchers incorporated the use of the multiple intelligences in small group instruction. Pretests were administered the week of August 30-September 3, 1999, with the posttests given the week of December 13-17, 1999. Teachers collaborated to ensure all the multiple intelligences were integrated into weekly units of study.

Targeted Students

The students were selected from an afternoon early childhood class and a heterogeneously grouped full day kindergarten. These two classrooms consisted of thirty children, six in the early childhood classroom and twenty-four in the kindergarten. After the first six weeks of the intervention five students were transferred to a newly formed fifth section of kindergarten, two students were unavailable for testing due to illness, and two students moved from the district. One student was totally non-verbal which made the pre and post testing impossible. Of the

remaining twenty targeted students, ten were male and ten were female ranging in age from four to six.

The three researchers, an early childhood teacher, a music teacher, and a reading recovery specialist, began by brainstorming units including lists of activities that would incorporate all eight multiple intelligences. A total of fifty-four lessons were taught based on thirteen thematic units. All three researchers were involved in planning these units and gathering materials prior to the beginning of the school year. At this time appropriate language tests were reviewed and selected to measure students growth. A parent survey (Appendix B) and a teacher survey (Appendix A) were developed in order to verify researchers predictions. A letter and consent form accompanied each survey explaining the purpose of the survey and intervention (Appendix N). On Wednesday, September 1, 1999, a parent meeting was held to further explain the intervention and answer questions. The researchers developed a daily one half hour action research plan using the scope and sequence of a lesson plan outline. Three days a week the children were divided into three groups with each researcher instructing a group. Due to the unavailability of one research teacher, the other two days the students were divided into two groups. The three major components of the intervention included: cooperative groups, language oriented activities, and the multiple intelligences. The students' progress was monitored on two checklists. One checklist addressed the students' language characteristics as heard on tape recordings (Appendix I). The second checklist indicated students preferred learning styles in each of the multiple intelligences (Appendix J). Teacher researchers also used a reflective tool to evaluate the success of each lesson (Appendix K).

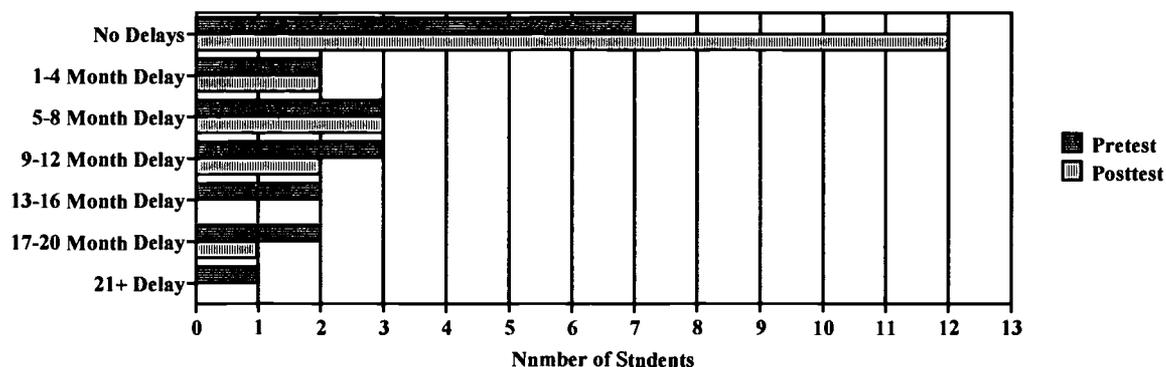
At the end of the action plan, the researchers administered a follow-up teacher survey to determine if there was a change in the student language usage (Appendix L). Only the teachers affected by the intervention were administered the post survey. It was decided there wasn't a need to survey the entire teaching staff because their students were not affected by the action plan. It was also determined not to administer a post parent survey due to the inconsistency between initial questions of language usage in the home and the actual pretest language results.

Presentation and Analysis of Results

In order for the researchers to determine whether the intervention was successful, the K-Seals and the One Word Picture Vocabulary post test were administered and compared to the pretest results. Both tests were used to confirm that results were accurate, valid, and non-biased. Students were given the post tests individually over the period of one week.

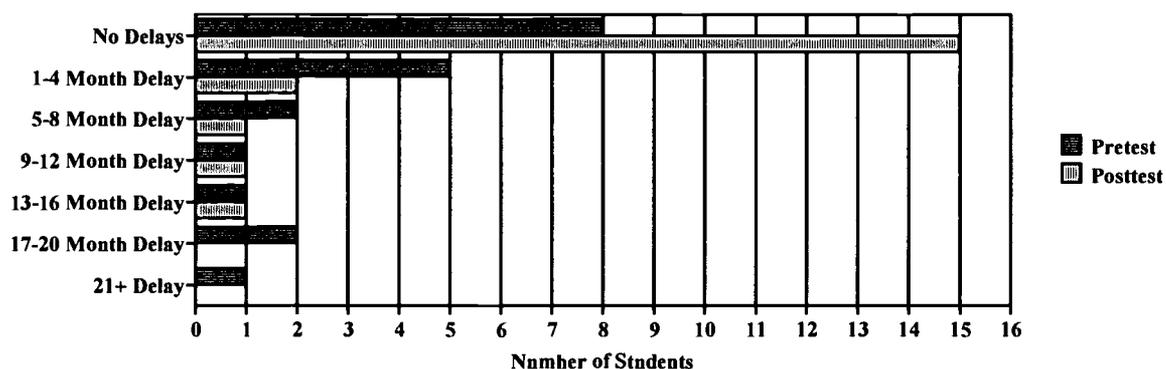
After comparing the pre and posttest results, the intervention appears to have had a positive effect on students language and vocabulary development. As figure 12 shows, K- Seals expressive language scores improved on the posttest. In the pretest, seven students showed no language delays. Posttest results revealed twelve students without language delays. The same amount of children in each test had one to four month delays and five to eight month delays. The number of students with a nine to twelve month delay decreased by one. In the pretest two students had a thirteen to a sixteen month delay. After the posttest, there were none in this category. The seventeen to twenty month delay had a decrease by one student as did the twenty-one month and above.

Figure 12. Expressive Language Delays Pre & Post (K-Seals)



The K-Seals receptive language posttest also indicates an improvement in language and vocabulary development. As figure 13 shows, the pretest showed eight students had no language delays. The posttest disclosed fifteen students with no receptive language delays. Students with a one to four month delay decreased by three, while student with a five to eight month delay decreased by one. Students with a nine to twelve month delay and a thirteen to a sixteen month delay remained at one student each. All other delays were eliminated.

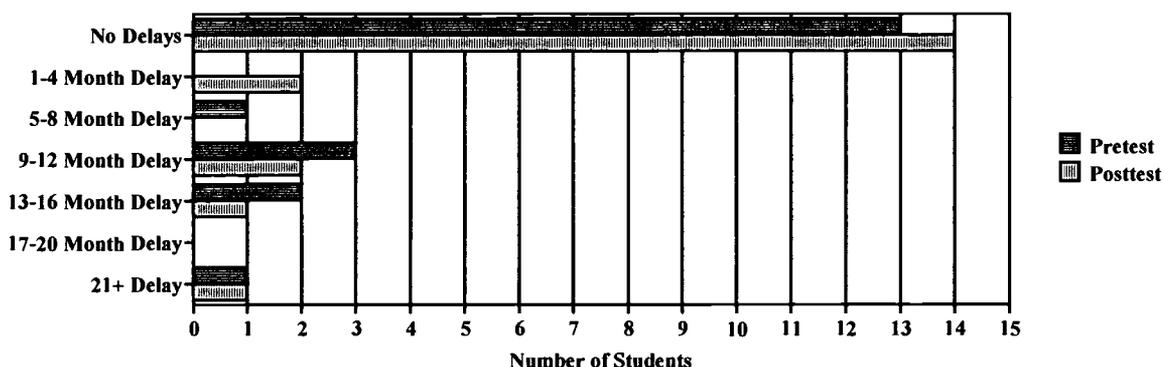
Figure 13. Receptive Language Delays Pre & Post (K-Seals)



The results from the Expressive and Receptive One Word Picture Vocabulary test by Morrison F. Gardner also indicated an improvement in language and vocabulary. The expressive pretest disclosed thirteen students with no language delays, while the posttest showed fourteen

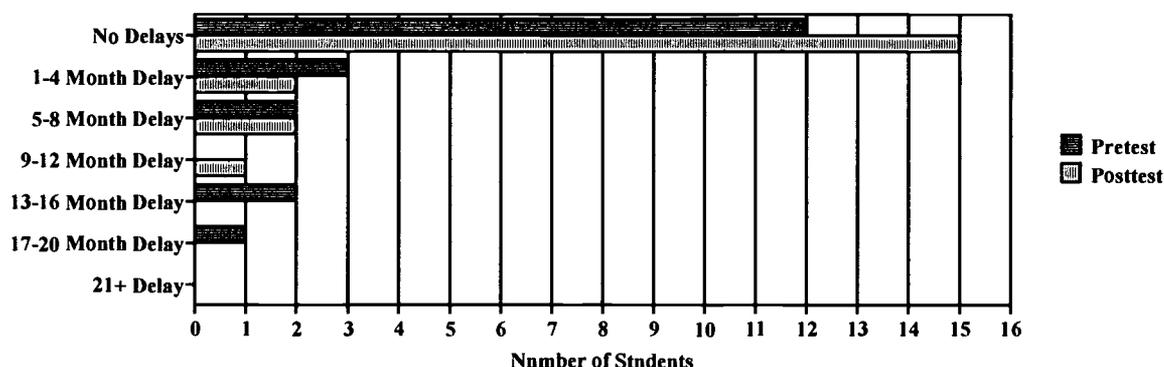
with no language delays. The pretest showed no students with a one to four month delay. The posttest revealed two students improved into this category from larger delays. Only one student taking the pretest had a five to eight month delay. No students had a five to eight month delay in the posttest. In the thirteen to sixteen month delay category there was a decrease of one student. The other delays remained the same. (Figure 14)

Figure 14. Expressive Language Delays Pre & Post (One Word Picture Vocabulary)



The pretest of the Receptive One Word Picture Test indicated twelve students had no delays. The posttest showed growth in language development with fifteen students having no delays. Students having a one to four month delay improved by one student, while the five to eight month delay remained the same. One student in the posttest showed a nine to twelve month delay while all other delays were eliminated. (Figure 15)

Figure 15. Receptive Language Delays Pre & Post (One Word Picture Vocabulary)



While the teacher researchers believe that it is important for students to reflect on the ways they learn, a pre survey was not given to the students in the fall because of their early adjustment to the school situation with little knowledge of numbers and text. Researchers felt there would be a lack of understanding of the task. A post survey was administered to help students become more aware of the learning process and promote the metacognitive strategies necessary for the engagement into their own learning (Appendix M). (Figure 16)

Figure 16. Student Survey

| Statements | Yes | No |
|---|------|-----|
| I talk more now than before I started school. | 80% | 20% |
| I feel good about my talking. | 100% | 0% |
| I understand what my teacher tells me. | 100% | 0% |
| I like to learn in different ways. | 100% | 0% |
| I like breaking up into groups and going into other classrooms with different teachers. | 100% | 0% |

The results indicate that students reflected positively on their language development following the intervention. One hundred percent of the targeted students reported that they felt good about their talking; understood what their teacher told them; liked to learn in different ways;

enjoyed breaking into groups and working with various teachers. Eighty percent of the students felt that they talk more now than they did at the beginning of the school year. By analyzing their learning experiences, the students were encouraged to think about the learning process involved in the intervention and evaluate not only what was learned, but also how it was learned and what conditions promoted or inhibited learning.

Teacher researchers chose not to survey the entire faculty at the end of the intervention since their students were not affected by the intervention. Follow-up surveys were given to the two teachers who had targeted students in their classrooms. Results from the survey are reported in the following two tables. The first table represents the pre and post intervention views of the kindergarten classroom teacher. (Figure 17) The second table depicts the pre and post observations of the early childhood classroom teacher. (Figure 18)

Figure 17. Kindergarten Teacher Survey Pre & Post

| <u>Questions</u> | Pre | Post |
|---|-----|------|
| 1. How many children in your classroom have difficulty expressing themselves? | 4-6 | 0 |
| 2. How many children do you have who do not talk in complete sentences? | 4-6 | 0 |
| 3. Do you have children who do not know basic vocabulary words? (colors, etc.) | 1-3 | 0 |
| 4. How many children in your class do you feel are language delayed? | 4-6 | 1-3 |
| 5. How many children in your room have trouble following directions? | 10+ | 1-3 |
| 6. How many of your students listen to read-aloud stories and interact with them? | 10+ | 10+ |

Figure 18. Early Childhood Teacher Survey Pre & Post

| <u>Questions</u> | Pre | Post |
|---|-----|------|
| 1. How many children in your classroom have difficulty expressing themselves? | 4-6 | 1-3 |
| 2. How many children do you have who do not talk in complete sentences? | 4-6 | 1-3 |
| 3. Do you have children who do not know basic vocabulary words? (colors, etc.) | 4-6 | 1-3 |
| 4. How many children in your class do you feel are language delayed? | 4-6 | 1-3 |
| 5. How many children in your room have trouble following directions? | 4-6 | 1-3 |
| 6. How many of your students listen to read-aloud stories and interact with them? | 4-6 | 4-6 |

The targeted classroom teachers indicated improvement in all areas of language development from the initial survey given in the fall. The table in figure 17 shows that the kindergarten teacher observed 4-6 children in the class were having difficulty expressing themselves. At the end of the intervention no students were exhibiting a difficulty in expressing themselves. The kindergarten teacher reported the same amount of improvement in the number of children talking in complete sentences. She felt that 1-3 children did not know basic vocabulary words before the intervention started. She indicated that no children were having difficulty with vocabulary words at the end of the intervention. The category of language delayed students was reported as 4-6 in the fall, and dropped to 1-3 at post intervention. At the beginning of the year, she had 10 or more students who were not following directions. By the end of the intervention she reported 1-3 students were not following directions. Only the category of students listening and interacting with stories stayed the same. The early childhood teacher reported improvement in all areas of language development also, except in the category of children listening to read-aloud stories and interacting with them.

The intervention plan resulted in successful learning with the pre and posttests indicating student growth in both expressive and receptive language. Teacher surveys lend credence to the theory by their favorable observations of improvement in the students' language development. The teacher researchers feel this was partially due to the use of the multiple intelligence language activities, along with the small group instruction.

Conclusions and Recommendations

Based on the presentation and analysis of results, the targeted early childhood and kindergarten classes have shown significant improvement in the area of language. This was verified through pre and posttests, teacher surveys, and student reflections. The students responded to the active learning involved in the integrated units of study, concentrated use of the multiple intelligences, cooperative learning, and small group instruction. Researchers felt the gains were significant because it is often difficult to show an increase in expressive or receptive language using a standardized testing instrument after only a fifteen week period of instruction. It is for this reason that two different standardized instruments were used to increase the factor of reliability in the results of the action plan. While each standardized test showed different starting points, both revealed marked improvement in the targeted students expressive and receptive vocabulary.

Researchers admitted that there were several outside factors that could have affected the success of the intervention. Small group instruction can be very powerful in accelerating children's growth and development in language. There were approximately ten children working with one teacher during three out of the five days a week. In this setting, there was more opportunity for dialogue between teacher and child. Teachers could model good language more

often for students and extend student conversations. Teacher researchers could identify the children that they needed to spend time with and talk to them more. This more interactive talking time, that the small group instruction allowed, provided an opportunity for an extension of students' language. The teacher could observe, listen to, and tune in to the learner, helping him or her make links between conversation and thought in the small group atmosphere.

The actual process involved in cooperative learning demands more verbalization on the part of each individual student having an impact on the success rate of language development. Children learn more about language by actually talking with other children and exercising their language skills. This is a natural learning situation because the child is conversing with a person who uses simple language and hopefully is flexible enough to change his or her language to suit the language of the listening child. Cooperative learning provides children with the opportunity to interact with each other, developing and practicing their conversational skills.

There are other variables that could have affected the language growth. Kindergarten students are young gains may be attributed to the natural progression and rapid growth of children's language at this stage of their development. Also, their regular kindergarten teacher has an impact on their language skills and she could be responsible for some of the growth. A speech pathologist has worked with one of the targeted kindergarten students and all of the early childhood students.

All three teacher researchers agreed that the action plan clearly demonstrated the power that lies in the incorporation of the multiple intelligences into instruction and student learning. As the children explored their world through the integrated learning units, they were able to express themselves using all of their learning modalities each week. Language skills grew as confidence,

interest level, and communication improved. One student, who was virtually nonverbal at the beginning of the year, actually started talking and interacting with her peers and the teachers. While she was the lowest scoring student at the beginning and end of the testing, she actually improved a great deal in both her receptive and expressive scores from where she started. Because of this intense intervention, she was diagnosed early for special education and is receiving weekly help from a speech pathologist.

This action project has impacted the researchers' teaching significantly. It has reinforced the importance of early intervention in children's learning. Each teacher has realized the impact of the multiple intelligences on children's achievement in any area of curriculum. The teacher researchers are aware when they are using the multiple intelligences and when they are not. The power of cooperative groups and how they are used to advance a skill level also became quite apparent. The learning that occurs between children is quite substantial.

The researchers recommend the continuation of the project. It's implementation into every kindergarten and early childhood classroom is crucial, since students do learn in different ways. One of the disadvantages of the action plan was the situation that none of the three teachers had their own heterogeneously grouped classroom. Therefore they selected a kindergarten class for the intervention. This meant that time was limited to a specific thirty minute a day intervention with no opportunity to carry over lessons or activities throughout the rest of the day. The researchers felt they needed more than the allotted amount of time to observe children, complete checklists accurately and completely, and to tape record and analyze the students' spoken language.

The teachers agreed that more research could be conducted from a similar action plan. It might be interesting to note the correlation between the use of a child's preferred intelligences and the actual language level of the child. Do certain preferred intelligences produce more verbal children? It would be expected that a verbal/linguistic child would be very successful in their expressive and receptive language. But what about the bodily/kinesthetic child? A comprehensive study might reveal some interesting quantitative data of the correlation in language levels with certain learning preferences.

It is surprising to discover how little research has been conducted to discover what types of tasks are most likely to promote talk in which students make new connections between their own ideas and those of others. Educational researchers need to investigate the types of teacher intervention that would promote language usage rather than suppress it. Thoughtful talk between teacher and student, and student to student, can accelerate not only the language process but the thinking process.

Researchers conclude that an intense daily language intervention using the multiple intelligences has a positive impact on students' expressive and receptive language. If we tap into children's learning strengths receptively and encourage their expressive development at the same time, then the intervention supports Howard Gardner's belief that there is "no limit to learning".

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APPENDICES

Appendix A

LANGUAGE DEVELOPMENT TEACHER SURVEY

During a normal school year:

1. How many children in your classroom have difficulty expressing themselves?
a) 0 b) 1-3 c) 4-6 d) 7-9 e) 10 or more
2. How many children do you have who do not talk in complete sentences?
a) 0 b) 1-3 c) 4-6 d) 7-9 e) 10 or more
3. Do you have children who do not know basic vocabulary words?
a) 0 b) 1-3 c) 4-6 d) 7-9 e) 10 or more
4. How many children in your class do you feel are language delayed?
a) 1-3 b) 4-6 c) 7-9 d) 10 or more
5. How many children in your room have trouble following directions?
a) 1-3 b) 4-6 c) 7-9 d) 10 or more
6. How many of your students listen to read-aloud stories and interact with them?
a) 1-3 b) 4-6 c) 7-9 d) 10 or more
7. Do you allow time for talking in your classroom? Check the appropriate activities that you use in you classroom.

- cooperative learning
- "Me" bags
- star of the week
- retell stories
- teamwork
- think/pair/share

Other:

8. How many minutes do you read aloud to your class each day?
a) 5 minutes b) 10 minutes c) 15 minutes d) 20 minutes or more

Appendix C

Multiple Intelligences

Directions: Underline the qualities that are the most like you. Then we'll graph them.

Logical-Mathematical

Recognize by: Strong at math & problem-solving skills. Asks "why" and "how" questions, wants to reason things out, wants to know "what's coming up next" & sequential thinking.

Ways to express: computer time, writing applications, programs, objects to sort, classify, gadgets to take apart or fix, science, reading, discussion, exploring, solving mysteries, word problems, breaking codes, museum trips, riddles, outlining, grouping, thinking problems & calculation activities.

Spatial

Recognize by: Strong imagination, likes to design, draw, read graphics, posters, needs pictures to understand, likes picture puzzles, mazes, organizing space, objects & areas. Ways to express: art, sports, mind-mapping, video, films, map making, charts, theater, wind-surfing, sculpture, roller blading, movement in the dark, dance, packing, bicycles, loading, balancing, driving & painting.

Interpersonal

Recognize by: Strong people skills. Loves to talk & influence, usually a group leader, an organizer, communicates well, good at conflict resolution, listening, negotiating & persuasion. Ways to express: makes friendships easily, win-win competition, leads discussion, peer teaching, collaboration, project director, counseling friends, understanding another's concerns & empathy.

Bodily-Kinesthetic

Recognize by: Desire to move! Constant movement or commitment to comfort. Wants to get up, move around, touch, fiddle with & handle things. Ways to express: stretching, role play, drama, exercise, theater, crafts & hobbies, play, outdoor events, dancing, games & sporting events.

Verbal-Linguistic

Recognize by: Loves language and loves to talk. Constant talking, a good memory for dates & names, likes to tell stories, likes to listen to stories, likes a variety of voices & remembers jokes. Ways to express: presentations, likes to argue, persuade, speeches, role-play, dialog, writing, doing reports, starts conversations, listens to tapes and reading--especially books with dialog.

Intrapersonal

Recognize by: Enjoys solitude, likes thinking, has a good understanding of strengths and weaknesses, good at goal-setting & is comfortable being alone. Ways to express: thinking strategies, imagery, journal writing, relaxation, learning about one's self, focusing and concentration exercises, reflection, meditation, self-help and time to be alone and process.

Musical-Rhythmic

Recognize by: Making music, sounds or rhythm. Enjoys humming, tapping & sometimes singing. Ways to express: keeping beat, attending concerts, using background music, singing, musical performances, writing out song lyrics, team cheers, using & playing instruments.

Naturalist

Recognize by: Organizing, sorting, grouping, listing. Ways to express: designing systems, shaping ideas, asking questions, ordering things, grouping people (like learning styles, multiple intelligences), could be gardening, interior design, scientist, teacher, administrator, detective, trainer, secretary, police work, explorer, likes brainstorming, then sortine.

(Adapted from Chapman, 1993)

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Appendix D

Gardner's Multiple Intelligences

Verbal / Linguistic

Speeches
 Debates
 Story Telling
 Reports
 Crosswords
 Newspapers
 Internet
 Research
 Biographies
 Autobiographies
 List of Books Read
 Annotated Bibliographies

Visual / Spatial

Artwork
 Photographs
 Math Manipulatives
 Graphic Organizers
 Posters, Charts
 Illustrations
 Cartoons
 Props for Plays
 Use of Overhead / Blackboard
 Story Boards
 Videotapes
 Murals
 Sculptures
 Models

Musical / Rhythmic

Background Music
 Songs about Books, People,
 Countries, Historical
 Events
 Raps
 Jingles
 Lyric Poems
 Choral Readings
 Tone Patterns
 Trios / Quartets
 Choirs
 Cheers

Intrapersonal

Reflective Journals
 Learning Logs
 Goal-Setting Journal
 Divided Journals
 Metacognitive Reflections
 Independent Reading
 Self-Evaluation
 Poetry Writing
 Meditations
 Concentration Exercises
 Diaries

Logical / Mathematical

Puzzles
 Outlines
 Timelines
 Analogies
 Patterns
 Problem Solving
 Lab Experiments
 Formulas
 Abstract Symbols
 Venn Diagrams
 Mind Maps
 Computer Games

Bodily / Kinesthetic

Field Trips
 Role Playing
 Learning Centers
 Labs
 Sports / Games
 Cooperative Learning
 Body Language
 Experiments
 Interviews
 Pantomiming
 Presentations
 Dances
 Aerobics

Interpersonal

Group Video, Film, Slides
 Team Computer Programs
 Think-Pair-Share
 Cooperative Tasks
 Jigsaws
 WrapArounds
 Electronic Mail
 Class Discussions
 Conversations
 Interviews
 Conferences

Naturalist

Outdoor Education
 Environmental Studies
 Field Trip (Farm, Zoo)
 Field Studies
 Bird Watching
 Nature Walk
 Weather Forecasting
 Stargazing
 Exploring Nature
 Ecology Studies
 Identifying Leaves and Rocks

(Adapted from Chapman, 1993)

Appendix E

SONGS AND FINGER PLAYS

| | |
|---------------------------------------|--------------------------------|
| Head, Shoulders, Knees and Toes | I'm A Little Turkey |
| Ten Little Fingers | Pizza Hut |
| Willoughby | Peanut Butter |
| Rock Around The Clock | Rudolph The Red-Nosed Reindeer |
| Where Is Thumpkin | Santa Claus Is Coming To Town |
| Five People In My Family | Jingle Bells |
| See My Family | |
| Talk, Talk, Talking On The Telephone | |
| Bumble Bee | |
| Inch By Inch | |
| Itsy Bitsy Spider | |
| The Ants Go Marching One By One | |
| Baby Beluga and The Rainbow of Colors | |
| How Many Ways | |
| Farmer In The Dell | |
| Kicker Kangaroo Tune | |
| Sammy | |
| Old McDonald | |
| Wheels On The Bus | |
| Wings On The Plane | |
| I'm A little Teapot | |

Appendix F

GAMES

Body Hop Scotch

Spider, Spider What Do You See?

Musical Colors

Fishing Game

Shape Bingo

Who Is In The Haunted House

Flashlight, Flashlight, Where Are You?

Appendix G

READ ALOUD BOOKS

Quick As A Cricket: Eric Carl

New Baby: Mercer Mayer

The Honeybee and The Robber: Eric Carl

The Very Busy Spider: Eric Carl

White Rabbits: Andy Gill

Brown Bear, Brown Bear: Bill Martin Jr.

Goldilocks and the Three Squares: Grace Maccarone

Cliffords First Autumn: Norman Bridwell

The Scarecrow: Paul Anderson

The Haunted House: Jan Pienkowski

Who Will Be My Mother: Joy Cowley

Going On A Bear Hunt: Micheal Rosen and Helen Oxenbury

Tracks: David Galef

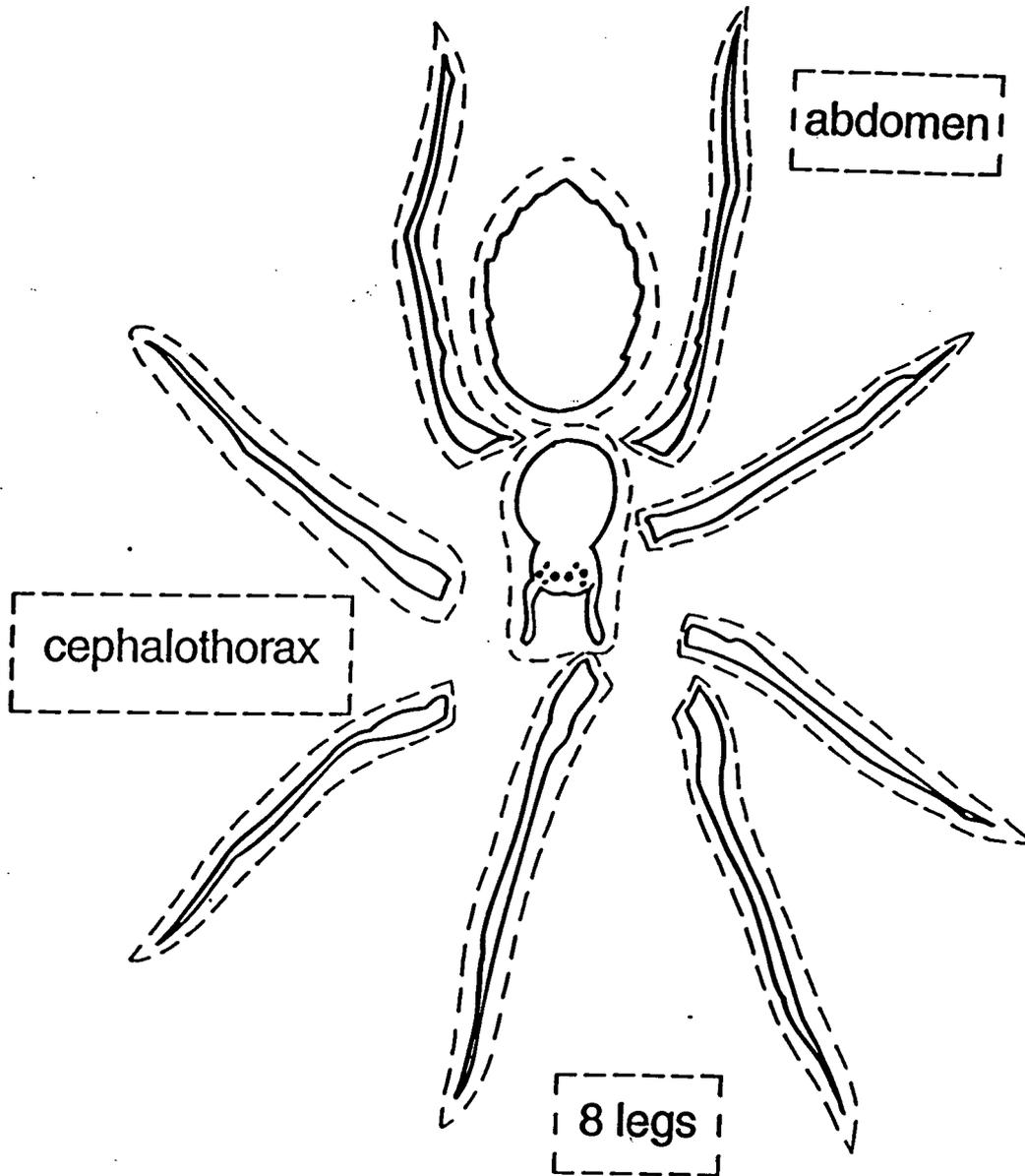
My First Thanksgiving: Tomie DePaola

The Little Mouse, The Red Ripe Strawberry: Don Audrey Wood

Twelve Cats of Christmas: Kandy Radzinski

Appendix H
Manipulative Materials

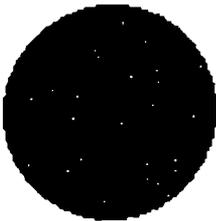
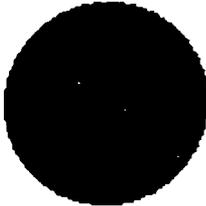
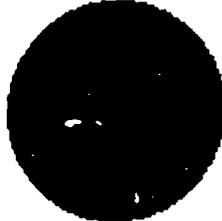
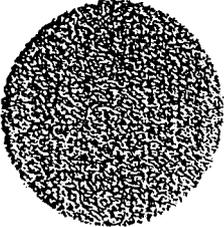
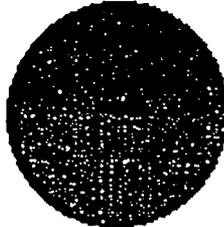
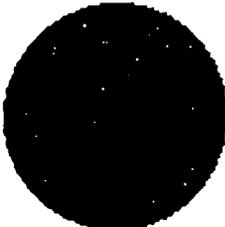
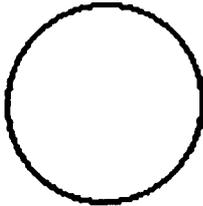
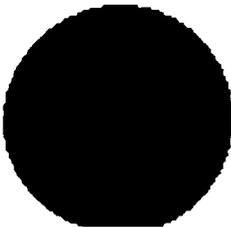
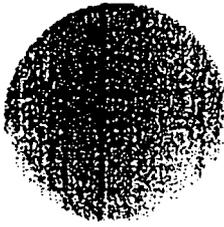
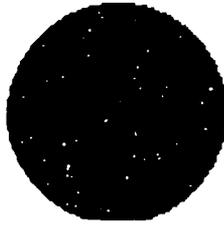
Parts of a Spider



To the teacher:
This is a drawing of a "generic" spider.

To use:
Color the spider pieces, cut out, glue to heavier paper if desired. Put a small piece of Velcro® on the backs so pieces will adhere to the flannel board.

Appendix H
Manipulative Materials (Continued)

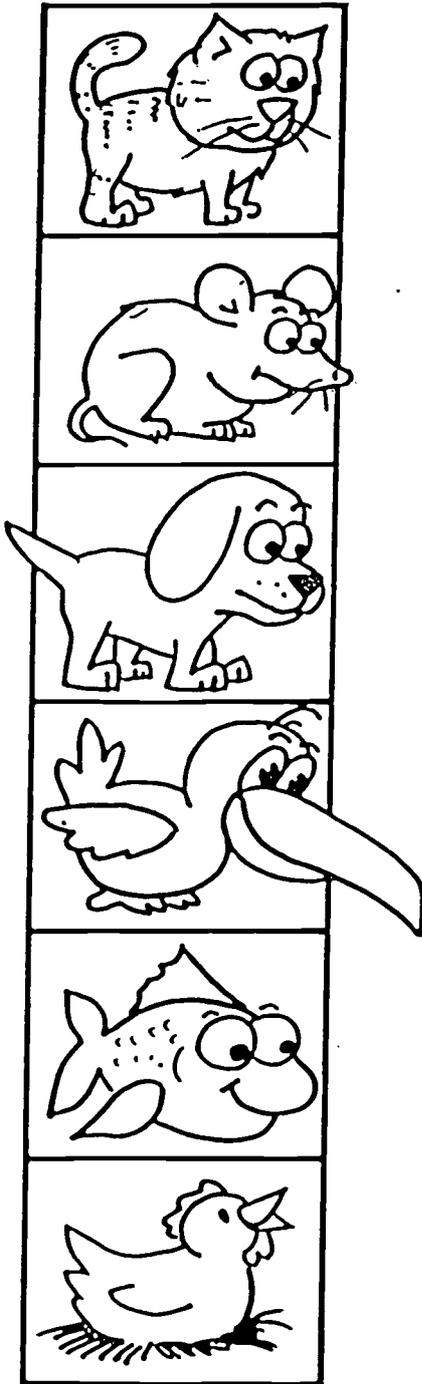
| | | |
|---|---|---|
| <p>blue</p>  | <p>brown</p>  | <p>black</p>  |
| <p>gray</p>  | | <p>green</p>  |
| <p>red</p>  | <p>white</p>  | <p>yellow</p> |
| <p>purple</p>  | <p>orange</p>  | <p>pink</p>  |

Appendix H
Manipulative Materials (Continued)

| | |
|--------|--|
| Green | |
| Yellow | |
| Blue | |
| Brown | |
| Orange | |
| Red | |

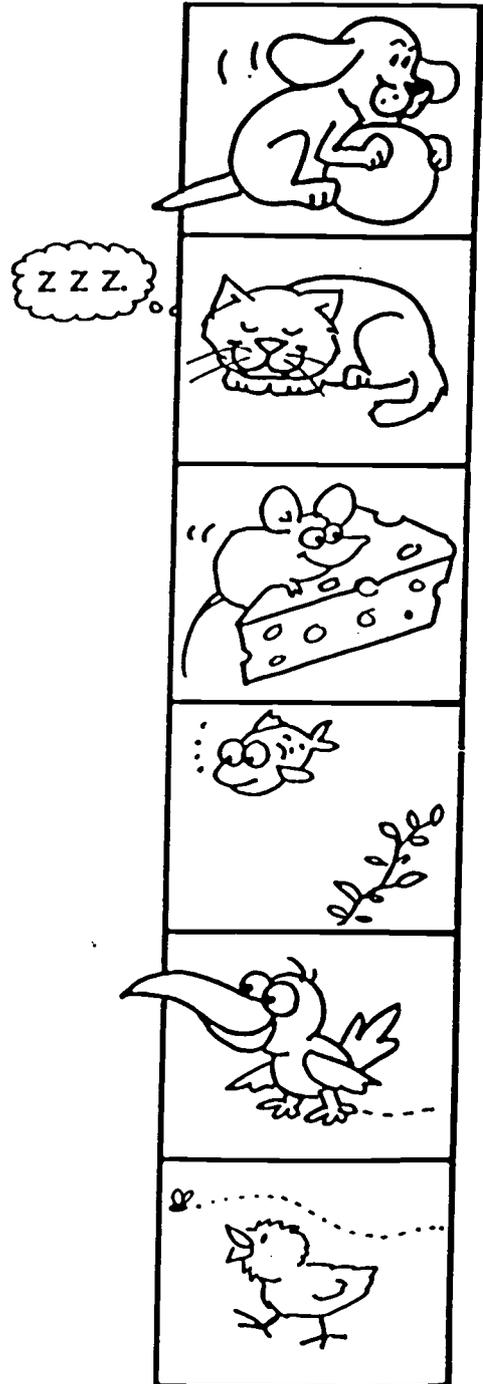
Appendix H
Manipulative Materials (Continued)

Name _____ Skill: Visual perception
Draw a line to match each animal with the correct baby.



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Appendix H
Manipulative Materials (Continued)

BLACKLINE MASTERS

BLUEPRINTS FOR THINKING

| | | |
|--|---------------------------------|--|
| KWL Thinking Skills: Predicting/Evaluating | What We Learned | |
| | What We Want to Find Out | |
| | What We Know | |

Appendix I

CHECKLIST RUBRIC FOR TAPE RECORDINGS

| Criteria | Pre + - | Post + - | Comments |
|---------------------------------------|------------|-------------|----------|
| Language skills | | | |
| Correct usage (he, she, I, you, them) | | | |
| Uses past and present tense of verbs | | | |
| Stays on topic | | | |
| Speaks in complex sentences | | | |
| Uses prior knowledge | | | |

Appendix K Teacher Reflective Tool

Week of _____

Actions Taken:

Reflection:

| PLUSES (+) | MINUSES (-) | INTERESTING (?) |
|------------|-------------|-----------------|
| | | |

Comments, Notes (Continued on back, as needed):

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Appendix L

**LANGUAGE DEVELOPMENT
TEACHER SURVEY**

After the intervention:

1. How many children in your classroom have difficulty expressing themselves?
a) 0 b) 1-3 c) 4-6 d) 7-9 e) 10 or more
2. How many children do you have who do not talk in complete sentences?
a) 0 b) 1-3 c) 4-6 d) 7-9 e) 10 or more
3. Do you have children who do not know basic vocabulary words?
a) 0 b) 1-3 c) 4-6 d) 7-9 e) 10 or more
4. How many children in your class do you feel are language delayed?
a) 0 b) 1-3 c. 4-6 d) 7-9 e) 10 or more
5. How many children in your classroom have trouble following directions?
a) 0 b) 1-3 c) 4-6 d) 7-9 e) 10 or more
6. How many of your students listen to read-aloud stories and interact with them?
a) 0 b) 1-3 c) 4-6 d) 7-9 e) 10 or more

STUDENT SURVEY

1. I talk more now than before I started school.



2. I feel good about my talking.



3. I understand what my teacher tells me.



4. I like to learn in different ways.



5. I like breaking up into groups and going into other classrooms with different teachers.



Appendix N

Dear Parents,

Welcome to the 1999-2000 school year at

We are very excited to begin this year as we are pursuing our Master's Degree. As part of our Master's program we are doing a research project on accelerating children's language and vocabulary. This will involve many fun activities based on children's interests. We will use small group instruction with lots of individual attention. This program will only be offered to Mrs. Park's afternoon early childhood class and Mrs. kindergarten class. We will be meeting with the students at the end of each day from 2:10 p.m. until 2:40 p.m. As part of our research we will be keeping records of how they progress as a whole group. We invite you to attend a short informational meeting about the program on Wednesday, September 1, 1999 at 6:00 p.m. If you cannot attend the meeting please sign the following permission slip allowing your child to participate in this wonderful program. If you have questions at any time please feel free to call us at the school. The phone number is

We're looking forward to a great year working with your child!

Thank you,

Mrs. Condis (Music Teacher)

Mrs. Parks (Early Childhood Teacher)

Mrs. Soldwedel (Reading Recovery Teacher)

Parent Consent Form

I _____ the parent/legal guardian of _____ acknowledge that the teachers have explained to me the need for this research. They have also explained what is involved and offered to answer any questions. I freely and voluntarily consent to my child's participation in this study. I understand all information gathered during the study will be completely confidential. I also understand that I may keep a copy of this consent form for my own information.

(Signature and Date)

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