A study in the effectiveness of the three to get ready program in promoting language learning

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A STUDY IN THE EFFECTIVENESS OF THE *THREE TO GET READY* PROGRAM IN PROMOTING LANGUAGE LEARNING

By

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ABSTRACT

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A STUDY IN THE EFFECTIVENESS OF THE THREE TO GET READY PROGRAM IN PROMOTING LANGUAGE LEARNING

2003

Thesis Advisor: Dr. Joy F. Xin

Master of Arts in Special Education

The purposes of this study were to: examine the effectiveness of a trimotoric approach using the Three to Get Ready program; to assist preschool children with disabilities to understand basic concepts and increase verbalization skills. Four students between the ages of 3 and 41/2 years old participated in this study. They were identified as preschool disabled by school district personnel using state eligibility standards, according to the state administration code (2001). All participating children had IEP objectives in expressive language and communication. They attended a public school in Southern New Jersey and were enrolled in the class for children with preschool disabilities to receive special education services for 2 ½ hours per day according to their
IEPs. None of the four children received training using the *Three to Get Ready* program prior to the study.

A multiple-base line single subject design was used in this study. The project was conducted over a twelve-week period and all instruction was provided in a preschool handicapped classroom. Prior to each weekly lesson, a pre-test was given to each participating child as baseline data for 12 weeks. At the conclusion of each weekly lesson, a posttest was given to each child to collect interaction data on student progress, for 12 weeks.

The results indicate that the intervention program generally did not lead to any significant increases in the language development or concept comprehension of the participating preschool children, though individual children with high cognitive functioning may benefit.
MINI-ABSTRACT

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Chapter I
Introduction

Statement of Problem

By the time children are 31/2 to 4 years of age, they have already acquired many important skills in language learning (Lu, 2000). They have a fairly large vocabulary to understand the function of words in referring to objects, events, and actions. They also have a basic command of basic conversational skills, such as talking about a variety of topics with different audiences and turn taking. The ability to communicate with others is important to a young child's development and is a precursor to academic learning, yet communication disorders can interfere with various aspects of learning language and social interactions (Brice, 2001).

Children with communication disorders have deficits in their ability to exchange information (Brice, 2001). Communication disorders may result from many different conditions. The most common conditions that affect children's communication include language-based learning disabilities, cerebral palsy, mental disabilities, and autism spectrum disorders. Communication and language-related disorders affect several million children in the United States and are the single most commons reason for special education referral (Casby, 1989).

Individuals who fail to gain effective communication skills are likely to be dependent and socially isolated (Brice, 2001). One goal of early intervention in special education programs is to identify children who are having problems with communication and language as early as possible so that the intervention can begin immediately. The Individuals with Disabilities Act (IDEA) (P.L. 101476) mandates to provide programs and services to infants and toddlers (Part C
in the newest reauthorization, P.L. 105-17). The law also emphasizes the importance of the family in the intervention process and requires the involvement and collaboration of multiple disciplines and agencies to meet the needs of families with young children (Atkins-Burnett & Allen-Meares, 2000). The goal of early intervention is to prevent or minimize the physical, cognitive, emotional, and resource limitations of young children disadvantaged by biological or environmental risk factors (Blackman, 2002).

There are many intervention approaches in early intervention. The unidisciplinary, the intradisciplinary, the multidisciplinary, and the interdisciplinary approaches have all been used in practices. The unidisciplinary approach entails possessing a sound preparation and competency in one discipline, whereas, the intradisciplinary approach is used by professionals to share knowledge among people of the same profession (Orelove & Sobsey, 1987). The multidisciplinary approach, on the other hand, has its origin in the medical field, in which data are gathered by individuals from various areas of expertise and reported to a single person (Stile & Olsen, 1980). Professionals in this approach work in isolation from one another. An interdisciplinary approach takes one step further, where members complete individual evaluations and recommendations are based upon a general consensus.

A transdisciplinary model of instruction is currently being emphasized in early intervention. This model refers to a transdisciplinary team that is composed of parents and professionals from several disciplines. The varying professionals include classroom teachers, speech therapists, occupational therapists, or physical therapists. According to McCollum & Hughes (1989), two beliefs are fundamental to the model: 1) children's development must be
viewed as integrated and interactive, and 2) children must be served within the context of the family (as summarized by the ERIC Digest, 1989). The belief is that when therapeutic input is shared and integrated meaningfully into educational programs, other team members tend to increase their knowledge, respect and value each other (York, Rainforth, & Giangraco, 1990). This particular model views the child as a "whole person in an environmental context" and recognizes the interdependence of variables and domains in the child’s development (Foley, 1990).

Children develop physically, emotionally, socially, and intellectually at different rates (Upton, 1979). For a child with mental disabilities these discrepancies are even wider than those of a normal child. According to Piaget (quoted in Peterson & Felton-Collins, 1986), the earliest learning experiences of all children arise from sensory motor information. For example, a child first becomes aware of the sensations within his body, and as he becomes more active he then becomes aware of the movements of his body. Movement through space is a child’s earliest and most dynamic interaction with the world (DeQuiros & Schrager, 1978). Children with development disabilities remain in the sensori-motor stage of development, even though they are chronologically much older. According to Piaget (quoted in Peterson & Felton-Collins, 1986), early language development begins in this initial stage where children begin to use vocalizations. The important function of attaching verbal signs (words) to the actions and concepts the child is working on at the sensori-motor level assists in his ability to internalize these actions so that he moves forward into the pre-operational stage towards more abstract thinking (Peterson & Felton-Collins, 1986).
According to Bruner (1973), language develops through three levels of experience –
enactive, iconic, and symbolic representation. Enactive representation involves active
participants and actual experience of the ideas being presented. Touching, holding, and playing
with the object or performing the activity are examples of enactive representation. A child at this
level may not learn efficiently through higher forms of representation (Bruner, 1973).

The Trimotoric Language Learning Theory (Czesak-Duffy & Giamo, 1987),
emphasizes the use of gross motor, fine motor, and oral motor activities to facilitate language
development. Because the gross motor activity is foremost in early development, this serve4s as
the leading portion of the Three to Get Ready program. The systematic progression of gross
motor activity leading to fine motor training is well practiced (Wachs, 1981). According to
Czesak-Duffy (1987), traditional methods used by speech therapists for articulation therapy hold
little application for preschoolers. Young children have an intimate oral awareness. Many of
them still seek comfort in sucking. Others still use the mouthing of objects to explore their
environment. In this program, a third dimension is added – oral motor activity. Czesak-Duffy
(1987) offers a simple explanation for this third dimension (oral motor). It is indicated that when
a child can locate oral perimeters, identify oral mechanism components, and shows an
emergence of lingual and oral movement through specific training, the child will be capable of
succeeding at sound pronunciation (Czesak-Duffy, 1987).

Significance of the Study

Communication problems impact the language development of young children,
especially those who are referred to special education services. Educators in preschool
handicapped programs need to know the effective and efficient methods to teach basic language
concepts and to ensure children's comprehension skills. There are many approaches and
instructional strategies in early language intervention for young children. Unfortunately, little research has been conducted regarding these children’s comprehension of basic concepts, especially using a trimotoric approach. The present research will examine the effectiveness of a trimotoric approach to increase comprehension of basic concepts and verbalizations of preschool children with communication disorders.

Purpose of the Study

The purposes of this study are to: (a) examine the effectiveness of a trimotoric approach using the Three to Get Ready program; (b) to evaluate the understanding of basic concepts and (c) to determine if this approach can increase the verbalization skills of preschool children with disabilities.

Research Questions

1. Will a trimotoric approach increase comprehension of basic concepts of preschool children with communication disorders?

2. Will a trimotoric approach increase verbalizations of preschool children with communication disorders?
Chapter II

Review of the Literature

Language is considered to be one of the most important skills an individual can possess (Warren, 1994). A child’s knowledge and use of language plays an important role in his or her education. The ability to communicate with others is critical to a young child’s development and communication skills that are always a prerequisite to their academic learning. Therefore, “language is the vocal communication of thoughts and ideas, a process by which is conveyed or expressed from one person to another” (Cole & Cole, 1982, p.1).

There are several theories to deal with language development of preschool children. Linguistic-oriented theories of language learning tend to emphasize genetic mechanisms in explaining language acquisition (Lewis & Taft, 1982). Cognitive theories (Lewis & Taft, 1982) focus on schema, rule structures, and content meaning as the distinctive characteristics of language learning. Social learning theories indicate interactions with other speakers as the critical part in learning language. The above three theories are supported by Vgotsky (1962) to emphasize that all cognitive processes including those involved in language, arise from social interactions. Behavioral theories (Lewis & Taft, 1982) assume association, reinforcement, and imitation as the primary factors in the acquisition of language. This position uses only external, observable events to support its hypotheses (Owen, Blount, & Moscow, 1978). According to Skinner, a behaviorist, “verbal behavior is learned from what happens after talks” (as quoted in Owen, Blount, Moscow, 1978, p.88). Skinner believes that the child’s “environment (consequences) teaches a person to operate on the environment with words” (Owen, Blount, &
Moscow, 1978, p.89). The debate over which theory accounts for the development of language may never be proven. Therefore, both the environment and the innate capacity for learning language seem to be present in many “different languages and that even within a culture there are varied speech patterns or dialects” (Owen, Blount, & Moscow, p. 90).

Regardless of the many theories on language development, it is agreed that communication and language abilities are central to most definitions of human intelligences (Gardner, 1983). The fundamental role of these abilities in social and cognitive functioning is abundantly clear when they fail to develop as expected. A preschool child with a language disorder often has difficulty communicating his wants and needs for one or a number of reasons. This impairment may be caused by an accident, disease, environment, or impoverishment (Warren, 2000). A language disorder is defined by the National Joint Committee on Learning Disabilities, in 1985, as follows: “deficits in receptive, integrative, and expressive language as well as delays in development of adequate semantics, phonology, morphology, syntax, and pragmatics” (Kirk, 1987, p.79). According to Warren (2000) there are three challenges in early intervention; a) efforts must be expanded to identify communication delays and disorders as early as possible; b) an increase in support for responsive interaction styles among all parents, educators, and therapists; and c) use of truly effective intervention approaches.

The purpose of this chapter is to review the research on those challenges. Not only will the research describe present intervention practices, it will confirm the lack of evidence
surrounding the benefits of a sensory-motor language intervention. The program, *Three to Get Ready*, and its use of the trimotoric approach as a language intervention will also be discussed.

**Early Intervention and Identification**

According to Cole and Cole (1981), many areas of learning are language related, thus, a child with language problems may have greater difficulty in one or more cognitive areas. It is found that early identification decreases academic and social problems, the need for lengthy interventions, and multiple services, and in turn, overall costs for services (Barnett & Escobar, 1990). Early intervention programs and preschool handicapped programs must include speech/language therapy services to children from birth to five, and language development and communication skills should be emphasized. For a child with any handicapping condition, these early years assume even greater significance.

The connection between language, social skills, and economic benefits are often discussed as reasons supporting the early identification of language problems in school aged children (Barnett & Escobar, 1990). It is known that many delays and disorders originate very early in development, yet frequently no systematic action is taken until development has already been hindered or disrupted for months or years. Because a great deal of variability is normal in the early stages of language development, there is a danger of misdiagnosing normal toddlers as language impaired (Thal & Tobias, 1994). These efforts of early identification are being improved but have not yet been widely applied in practice.

Aspedon, Chapman, Hux, and Sanger (1995) examined the early referral of school aged children with language problems. They investigated the effectiveness of using an observational
checklist to facilitate early teacher referral of children suspected of having language problems. The results indicated that this early referral was effective and benefited these young children. For example, 75% of the children in the study chosen to identify with the checklist were later referred for evaluations in their respective schools, and 71.43% of these children whose evaluations were completed by the time of follow-up qualified for special education services. It is concluded that although the method of using a checklist deemed successful, further research needs to be done to compare the effectiveness of other checklists as well as in-service training, case reports, written definition and descriptions of language use and misuse (Aspedon, Chapman, et al, 1995). Most importantly, by improving early referral, speech therapists, and educators could minimize the problems associated with the delay of intervention services.

Over the last 15 years, early intervention has been evolving. Originally, service providers focused on their own discipline, acting as experts to assess, develop, and prescribe interventions for children. Parents and families had a passive role in the traditional method. They were given suggestions or recommendations and expected to follow through with these suggestions. The most recent change in service delivery focuses on relationships and the combined efforts of various therapists, educators, and medical personnel. This is referred to as a transdisciplinary model of service delivery.

Transdisciplinary Model

The transdisciplinary model of service delivery emphasizes relationships. It is characterized by a sharing or transferring of information and skills across traditional disciplinary boundaries (Orelove & Sobsey, 1987) to help an individual. In this approach, team meetings are directed by one or two persons who are primary facilitators of services, and other team members...
who act as consultants. In this educational team, therapists, vital members who become involved to a greater extent in a consultative role to the teacher and other team members work closely together for the purpose of enhancing student performance. Discipline boundaries are crossed and re-crossed, thereby maximizing communication, interaction and cooperation among team members (Rosetti, 1990).

Chapman and Ware (1999) examined a collaborative working arrangement in a mainstream school between health and educational personnel. The authors argued that the former multi disciplinary approaches had not been as effective as they expected, therefore, their study was conducted to examine the effectiveness of a transdisciplinary approach in an inclusion setting of a public school. The therapists in the team were an occupational therapist, a physiotherapist, and a speech/language therapist. It is found that using a transdisciplinary model with a team approach enables the existing relationships between staff and therapists to be strengthened as all staff teach and learn together. It allows for the expansion of people's roles and expertise and opportunities for support and shared responsibilities amongst the team. From a therapy standpoint, the group provided an opportunity to increase what the therapists could offer in a mainstream setting. It also helped to reinforce the importance of the multi sensory curriculum in the early years (Chapman & Ware, 1999).

Watkins (1988) describes a pilot program to encourage independent communication of several nonverbal children, ages 3-5. All were identified as having communication deficits which severely restricted their participation in the classroom. A transdisciplinary team approach was used. The team members included the classroom teacher, speech therapist, instructional aide, computer resource person, occupational and physical therapists, principal, and parents. Frequent team meetings allowed ongoing evaluation of students' performance, cohesive
development of individualized education programs, integration of academic and therapy goals, and formation of instructional strategies. For example, the speech therapist provided students instruction and modeling techniques for the classroom teacher. Both the speech and occupational therapist spent 50% of their time in the classroom providing integrated therapy. The physical therapist acted as a consultant to the teacher. Although the main focus of the program was to provide an opportunity for non-verbal children to become independent communicators, there were secondary benefits which taught the staff how to address the multiplicity of needs when working with this population. It is believed that this transdisciplinary approach contributed to the improvement and increase of their students' communication (Watkins, 1988).

Hinojosa (2001) studied the interaction of a single clinical team over a 6 month period working with one child in a hospital-based early intervention program. The data were collected through interviews, direct observations of family and team members, and selected videotaping of team meetings. The purpose of the study was to answer the question, such as, what underlies collaboration in a team that provides services to a young child with disabilities and his or her family? It was found that rather than one program operating cohesively with one strong philosophy, two programs with different philosophies emerged. The hospital-governed therapy treatment program followed a medical model, whereas the education model was loosely articulated around social and cognitive ideas. Unfortunately, therapies were delivered outside of the classroom and a transdisciplinary model was never achieved. If participants were aware of the need to equally value educational and therapeutic components, and neither was subservient to the other, there would have been greater room for collaboration. Dukewits and Gowan (1996) indicated that when individuals come together with a common goal, they magically begin to
work as a team. In reality, however, developing team collaboration is not easy. Dukewits and Gowan (1996) proposed a five-step process to enhance collaboration of specialists and educators. This process includes 1) establishing trust, 2) developing common beliefs and attitudes, 3) empowering team members, 4) having effectively managed team meetings, and 5) providing feedback about team functioning.

Lamorey and Ryan (1998) conducted a national survey in the United States. This survey was designed to examine the relationship between current theories and practices of multidisciplinary, interdisciplinary, and transdisciplinary special education teams. A total of 195 professionals participated in the study and self-reported their responses to the survey. It is found that the barriers to effective team functioning were administrative obstacles, the need for team members to develop collaborative skills, difficulty in communication, and lack of competence. In their study, teams reported only moderate levels of parent involvement.

Parental Involvement

Parental involvement is a driving factor and a main component in the early intervention of young children (Bruner, 1981). This involvement is a main component to the idea of early intervention. Girolametto, Pearce, and Weitzman (1996) explored the effects of training parents to administer focused stimulation intervention to teach specific target words to their toddlers with expressive language delay. Twenty-five mothers and their late-talking toddlers were randomly assigned to treatment and control groups. The Hanen Program for Parents was administered to families by two experienced speech pathologists and a parent associated who had a child with language delay and had completed a program. The 11 week treatment included eight evening sessions to teach program strategies and three home visits to provide parents with
feedback regarding their own child’s progress. During the visits, the mothers were videotaped while interacting with their child during a free play situation and they were reviewed to provide immediate feedback. On the spot coaching was available if needed. Home practice was assigned and reviewed at subsequent sessions. The content of the Hanen Program was adapted to include three modifications consistent with focused stimulation: 1) during the 2nd training session, mothers were given a list of ten target words and instructed to incorporate those words into daily routines; 2) parents were trained to select additional lexical targets once the child used the target spontaneously at least three times in three different situations in one week; 3) parents were taught to model 2 word combinations. It was found that after the training, the mothers’ language input was slower, less complex, and more focused than the mothers in the control group without training. The results for the children overwhelmingly supported the effects of early intervention. During the 4 month interval between pre and post test, children in the study made developmental gains in vocabulary, in the use of multiword phrases, and in grammatical complexity that were over and above the maturational changes of the control group (Girolametto et al., 1996).

Cleave and associates (1993) conducted an experimental evaluation of two approaches to the facilitation of grammar in children with language impairment. This study is similar to the previous study in that it made use of focused stimulation by parents for 4 months. This study concentrated on the effects of the parents’ administration of the intervention compared to those of the therapist. Subjects were 30 children between the ages of 3:8 and 5:10 who had marked delays in grammatical development. Four to six parents and their children took part in each treatment subgroup. The parents in the subgroup were seen in 2 hour group sessions that did not
involve the children. Parent meetings took place once weekly for the first 12 weeks of the program and once monthly for the remaining 2 months of intervention. During the 12 week training phase the speech pathologist made three visits to each child’s home to ensure that the parents were continuing to use the procedures, to focus the use of the techniques on a set of goals selected for each child, and to assess the child’s progress. Children who served in a delayed-treatment control group averaged no gains over their no-treatment period. Large treatment effects were observed for both treatment groups on three or four measures of grammatical expression. The results support the participation of parents in the intervention process, however, when parents take such a large part in the process, the parents must be closely and continuously monitored (Cleave et al., 1993).

**Intervention Approaches**

Despite three decades of steady progress, there is still a great deal of work that remains to be done before we can reliably implement interventions that are capable of minimizing the long-term effects of a young child’s communication or language impairment (Warren, 2000). As PL 99-457, 1986, has encouraged us to devise better means of assessing and treating children with communication disorders from birth to 5, professionals are concerned about the prognosis for 2 year olds who are slow to develop language. These children are often identified as “late talkers.” Various studies have been conducted on ‘late talkers’ based on prior research of Paul (1991), Rescoria (1991), and Thal (1991). Rescoria (1991) established a common criteria to identify late talkers. This is an ability of less than 50-word productive vocabulary at 24 months or no multiword combinations. Follow-up studies have shown that approximately half of the
children exhibit persistent language difficulties at the age of 3 years (Paul, 1991). According to Murray-Branch, Miller, and Weisner (1994) the 'late talkers' had all been identified on the basis of their early restricted expressive language abilities. A number of these late talkers had deficits in other areas, such as socialization, phonological/articulation, and receptive language abilities. In their study, a language treatment program was provided after the various assessment measures were given to each child. This intervention program was a 9 month program designed to facilitate social interaction, and encourage language use in functional, communicative settings. Initially, the focus was vocabulary skills then it progressed to multi-word combinations.

Because the sample size of 4 children was relatively small, the authors suggested conducting more research using a larger sample of children. Based on the particular assessment measures, they found no variables that were clearly predictive of the four late talkers' productive language skills at age 3, even though they had considerable prospective developmental information about the toddlers. At approximately 2 years of age, the four toddlers were displaying late patterns of expressive language development. Of the four toddlers, one child moved into normal range by the age of three years and the remaining three children were at the borderline with respect to combinational language skills.

A comparison of two methods for promoting productive vocabulary in late talkers was conducted as a follow-up (Murray-Branch, Miller, & Weisner, 1994). This investigation compared the effectiveness of modeling versus modeling plus evoked production. A single-subject alternating treatments design was employed and different sets of words were taught under the two treatment methods during group and individual instruction. The authors found that effectiveness of either approach could not be concluded as actually having promoted vocabulary
use beyond the levels that would have occurred without intervention (Murray-Branch, Miller, & Weisner, 1994). The limited evidence from the control word probes and the anecdotal noted from the mothers suggested that there was some impact. Again, it was suggested that a larger group design be used to verify the findings.

**Milieu Language Intervention**

Milieu teaching utilizes a child-oriented focus and typical routines within daily activities, and an environmental arrangement to provide opportunities to teach target structures. This teaching incorporates adult-directed strategies, in the form of mand-models, i.e. requesting a response from a child and then following this with a model if needed and time-delay to elicit specific target structures. Warren, Gazdag, Bambara, & Jones (1994) conducted a research study to address some of the limitations of our knowledge base on the efficacy and efficiency of milieu teaching identified by Kaiser et al (1992). Therefore a milieu language teaching intervention was implemented to teach two- or- three term semantic relationships to 11 children. The children’s ages ranged from 37 to 76 months. The mean intelligence quotient was 62. Their IQ measures placed them between the moderate to borderline range of mental retardation. No subjects exhibited significant hearing, vision, or behavioral problems. The study was conducted at the students’ schools. Eight of the subjects attended a university-based early intervention program for children up to age 5. They participated in this program for 3 hours per day, 4 days per week, 12 months a year. Three of the children attended a public school program for children with developmental delays up to age 8. They participated in this program approximately 7 hours per day, 5 days a week. In all settings, students were taught by certified teachers. The experimental sessions consisted of a trainer, target subject, and a peer. Peers were selected from the subjects’ classroom and were rotated daily. These peers functioned at or above the
developmental level of the subjects with whom they were paired. Data were obtained by collecting verbatim samples of the subjects' language taken from 15-minute observations of the baseline, training, and generalization sessions. The observer also coded each utterance according to degree of support and function. "Degree of support" referred to the adult or peer verbalization that immediately preceded an utterance by the target child. Measures of generativity were analyzed via pre/post group comparisons. Concurrent with the intervention, subjects showed substantial gains in their ability to generatively produce semantic relationships and across settings, adults, and interaction styles. Subjects also correctly respond to an increasing proportion of target probe questions.

It is agreed that a highly responsive environment for as much time possible is necessary for language to development. Belief in the superiority of integrated services, whereby the individuals who provide direct intervention are those who spend significant parts of the day with a child (usually teachers and parents). This is based on the premise that a sizeable positive impact on a child's communication skills will occur only in an optimal learning environment that can be sustained beyond the 30 to 40 minutes that may occur in a contrived clinical situation (Warren, 1993). Regularly experiencing a wide range of natural teaching strategies such as expansions, modeling, use of concrete simplified vocabulary; and discussions on objects and events the child is familiar with and at his/her comprehension level can increase a child's language abilities. Daily interactions appear to aid the acquisition of communicative competence in most children (Galloway & Richards, 1994) and may be even more important for children with developmental delays (Yoder, Warren, McCathren, & Leew, 1998). Language intervention with preschool handicapped youngsters is more effective when it occurs throughout the day rather than only during the time specifically scheduled (Kaczmarek, 1985).
Sensory-Motor Learning

Although much research has been conducted in the area of language interventions for young children, the components previously studied were in limited contexts with a relatively narrow focus. For example, most early language intervention studies focus on expressive skills, whereas comprehension has rarely been studied as an outcome (Warren, 2000), neither has the benefits of motor activities in the facilitation of language (Mauer, 1999).

The earliest learning experiences of all children arise from sensory-motor information. A child first becomes aware of sensations within his body, and as he becomes more active, he then becomes aware of the movements of his body. Sensory-motor experiences are fundamental to the child's development.

Multiple handicapped children have a varied range of abilities. Some children will not advance beyond the level of intelligence at the age of one while others may be quite intelligent but severely disturbed. Although extremely varied, mentally handicapped children tend to be more on age level in terms of movement and motor skills. They can consequently experience success from taking part in many forms of activity.

Children who have experienced success in movement which involves the body as a whole and direct their attention in a purposeful way, tend to settle down more quickly for fine motor activities. Because the young mentally handicapped children have often missed out so much in terms of developing body awareness, they need movement opportunities which will help them to catch up with all aspects of development (Upton, 1979).

Fallon and Umansky (1985) emphasize the importance of utilizing a child's primary input mode. All learners show a differential preference to receive and process information. It is found
that handicapped children are not excluded from this learning characteristic, and if the preferential input mode is the locus of the impairment, learning may be considerably more difficult. Because young children are more adaptable, it is suggested that teachers must take advantage of input channels through which accurate information is likely to be received and to nurture secondary input channels that are the site of the impairment. According to Fallon and Umansky (1985), young and severely handicapped children learn initially through movement. The kinesthetic stimulation of arms and legs moving in space, along with watching them move and hearing the sounds of objects children touch or strike, provides their initial learning experiences.

It is believed that using an nitrated treatment program designed to combine sensory motor and speech/language skills, children can organize their neurological system, make more adaptive sensorimotor responses, and therefore, make faster gains in speech and language acquisition (Mauer, 1999). Mauer (1999) encourages educators and speech pathologists to incorporate language into movement activities. The purpose is to facilitate the child’s sensory processing and improve arousal and attention to the task, language, resulting in increased speech production and understanding of language (Mauer, 1999).

Three to Get Ready program

One preschool program, *Three to Get Ready*, was being used by Czesak-Duffy and Giaimo during the mid-80’s. This program seeks to present basic concepts to children through the use of three dimensions including a gross motor component, a fine motor component, and an oral motor component. Therefore, this program had been used statewide to help children conceptualize through trimotor activities, thereby enhancing a teacher’s chance at success.
The lessons in *Three to Get Ready* were designed for use with a team approach consisting of teacher, occupational therapist, speech therapist, and additional staff. The trimotoric language learning program began to take form when the teachers achieved successful results by using gross motor concepts as the earliest forms of language cognition. They realized that movement was the attention getting that was needed to bring some handicapped children into a communicating world. The program was first used within a curriculum at the Mini University Community Enrichment Program in Kearny, New Jersey. After two years using the program, it was found that ¼ of the children in Kearny School System, are now in regular school settings and many who were preverbal at age three were speaking in three-to-five word sentences. Unfortunately, additional research surrounding this program is limited.

**Summary**

An intense review of the literature summarized the components that are necessary for early intervention to be successful; the research surrounding language interventions, and to explore the impact of sensory-motor experiences on the learning and language acquisition of children with disabilities. Various types of language interventions have results in gains in language acquisition. Unfortunately, many are studied in limited contexts and have a relatively narrow focus. The sampling groups are generally small and the participating children only have language disorders, without other impairments presented. Most early language intervention studies focus on expressive skills, whereas comprehension has rarely been studied as an outcome (Warren, 2000), neither has the benefits of motor activities in the facilitation of language. During the preschool years, children can learn more through active, engaged, meaningful experiences. Through these experiences, young children construct their own knowledge by interacting with their environments and others.
The present study attempts to find if other input modes as *Three to Get Ready* in language acquisition can help children with communication disorders be successful in early intervention. The *Three to Get Ready* program provides a trimotoric approach including gross, fine, and oral motor components in learning language. Because sensory motor and speech/language skills depend on each other, the treatment with integrated skills should deem valuable. This trimotoric approach may prove to be a valuable teaching tool for children with language disorders.
Sample Students

Four children between the ages of 3 and 4 ½ years old participated in this study. They were identified as preschool disabled by school district personnel using state eligibility standards, according to the state administration code (2001). All participating children had IEP objectives in expressive language and communication. They attended a public school in Southern New Jersey and were enrolled in the class for children with preschool disabilities to receive special education services for 2 ½ hours per day according to their IEPs. None of the four children received training using the Three to Get Ready program prior to the study. The general information of participating children is presented in Table 1.

Student 1 (Mary): Mary started class on September 5, 2002. She was 3.0 years old and had received Early Intervention Services prior to age three. Mary had been diagnosed with Down’s Syndrome. Upon entering the program, she could verbalize three words, “OK”, “Hello”, and “Bye, Bye”. Her verbalizations consisted mostly of grunts and jargon. Her receptive language skills were also delayed. She had very poor attention skills with a high level of distractibility, which could be attributed to her cognitive delays.

Student 2 (Robbie): Robbie started his second year of school on September 5, 2002. He was 3 years 11 months of age and diagnosed with Down’s Syndrome. Upon entering the program in his second year, Robbie’s vocabulary consisted of about 10 words, such as “hi”, “bye”, “ok”, “help me”, “yes”, “no”, “mommy”, “daddy”, and “Ty-zee” (brother’s name).
**Student 3 (Chip):** Chip started his second year of school on September 5, 2002. He was 3 years 11 months of age. He had been found exhibiting some possible PDD characteristics. He was also diagnosed as having delayed echolalia. Chip’s receptive language skills were around 17 months that were also delayed.

**Student 4 (Brian):** Brian started his second year at the school on September 5, 2002. He was 3 years 9 months of age. He had been evaluated and found to be exhibiting some possible PDD characteristics. Brian’s receptive skills were slightly delayed.

**Table 1: General Information of the participating children**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Chronological Age</th>
<th>Cognitive Age</th>
<th>Expressive Language</th>
<th>Receptive Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Mary</td>
<td>3.0 years</td>
<td>10 months</td>
<td>15 months</td>
<td>16 months</td>
</tr>
<tr>
<td>2 Robbie</td>
<td>3.11 years</td>
<td>12 months</td>
<td>16 months</td>
<td>17 months</td>
</tr>
<tr>
<td>3 Chip</td>
<td>3.11 years</td>
<td>18-24 months</td>
<td>17 months</td>
<td>17 months</td>
</tr>
<tr>
<td>4 Brian</td>
<td>3.9 years</td>
<td>36 months</td>
<td>18-24 months</td>
<td>36 months</td>
</tr>
</tbody>
</table>

**Note** The language skills were tested using the *Preschool Language Scale* (Zimmerman, I., 1992).

**Research Design**

A multiple-base line single subject design was used in this study. The experiment was conducted over a twelve-week period and all instruction was provided in a preschool handicapped classroom. Prior to each weekly lesson, a pre-test was given to each participating child to establish a baseline, yielding 12 weeks of baseline data. At the conclusion of each
weekly lesson, a posttest was given to each subject to collect data on student progress, yielding 12 weeks of intervention for each child. The data are presented in graphs to measure score changes in comprehension skills and verbalizations to examine each child’s achievement.

**Instructional Material**

The *Three to Get Ready* program was used. This program seeks to present basic concepts to children through the use of three dimensions including a gross motor component, a fine motor component, and an oral motor component. The materials varied with each lesson. The fine motor props consisted of worksheets and paper hand puppets. The puppets are made prior to each lesson and are used during reinforcement period when singing a song. The song lyrics are also conducted in the activity book. Scissors, crayons, and glue are needed to complete the worksheet activities. Each lesson concentrated on two concepts with specific directions on the layout of each area and the materials needed. A total of twelve lessons were conducted. (See Appendix A)

**Setting**

The preschool classroom is staffed with one special education teacher, an instructional aide, and a one-on-one aide. A speech therapist and an occupational therapist are in the classroom for one hour, two days a week. Each lesson was instructed for one week. The basic setup consisted of the gross motor area, which required the largest space and largest pieces of equipment. The fine motor area required appropriate-sized tables and chairs, paper-puppet sheets, crayons, scissors, and glue; and the oral-motor area, which required a mirror that was large enough for full vision of the facilitator’s and children’s faces, with accompanying chairs or spaces to sit comfortably in front of the mirror.
Measurement

A teacher-made pre-test was administered on Monday prior to the lesson being taught. The subjects were tested for both expressive language and receptive language skills and concept understanding that were planned to be taught in each lesson. Using materials that would be used in the lesson (the paper mitt, puppet, teacher-made fine motor project), students were asked to complete actions required by the teacher; i.e. Receptive - Touch something in the cart; Expressive-Where is the milk? These questions would test concepts of “in/out.” An example of the testing materials is presented in Table 2.

Table 2: An example of teacher made test (“In /Out” Concepts)

<table>
<thead>
<tr>
<th>Receptive</th>
<th>Correct Response “+”</th>
<th>Incorrect Response “-“</th>
</tr>
</thead>
<tbody>
<tr>
<td>Touch something in the cart.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Touch something out of the cart.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Expressive

<table>
<thead>
<tr>
<th>Where is the milk?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where is the cookie box?</td>
</tr>
</tbody>
</table>

**Note** Only vocalization of the concept “in/out” was recorded as the correct response.

Instructional Procedure

After the pre-test was given, the lessons began with a short introduction to the general group, using gross motor tasks. After the introduction, the group of children was divided into three groups: a gross motor group, conducted by the occupational therapist; a fine motor group, conducted by the teacher; and an oral motor group, conducted by the speech therapist. Groups
rotated after each child experienced all three motor areas. Each group spent 10 minutes at each area. A complete language lesson took 40 minutes with whole group introduction. Each lesson was repeated daily for a week of 5 days, then the same test was given at the end of the fifth day.

During the 3 days when the occupational therapist and the speech therapist were not present, an alternate model would be used to involve the teacher and aide taking the entire group through each task area, beginning with gross motor, proceeding to fine motor, and concluding with oral motor tasks. The procedure was consistent to the 2 days when the occupational therapist and the speech therapist were present. One lesson procedure is presented as an example in Table 3.

Table 3: Lesson procedures

<table>
<thead>
<tr>
<th>Objective: To demonstrate an understanding of directional concepts in/out.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Materials:</strong> play food market, shopping cart, empty food containers, food items, cash register, play money, purse, cardboard box (car), doll, empty bags</td>
</tr>
<tr>
<td><strong>Vocabulary:</strong> in, out, food market, cart, bag, purse, money, buy, shelf</td>
</tr>
<tr>
<td><strong>Preparation:</strong> Set up play store w/ items on display in gross motor area. Have box (for a car), doll, and shopping cart nearby. Have scissors, paste, crayons, activity sheets, change purse, and money</td>
</tr>
<tr>
<td>In fine motor area. Arrange mirror in oral motor area.</td>
</tr>
<tr>
<td><strong>Gross Motor Tasks:</strong> Get in/out of car. Walk in/out of market area. Lift doll in/out of shopping cart. Place food items in/out of shopping cart.</td>
</tr>
</tbody>
</table>
Put food items in/out of bag.

**Fine Motor Tasks:** Make a circle with all 5 fingers; use thumb and forefinger of opposite hand to form pincer grasp.

Use pincer grasp in/out of circle.

Use pincer grasp to put money in/out of purse.

Color/Cut/paste the milk carton in cart.

Color/Cut/Paste the cookie box in square on the shelf.

Place the hand in/out of finished activity mitt.

**Oral Motor Tasks:** Open mouth and stick tongue out of mouth.

Put tongue in mouth and close mouth.

Puff cheeks out with air.

Suck cheeks in and hold between molars.

Close mouth and breathe in/out through nose.

**Conclusion:** Sing a song.

Practice all week.

Record test.

---

**Data Collection**

The pre-test scores were used as baseline data in phase I and the posttest scores were used for the intervention as phase II. These posttests were given to each child at the end of each week to record any retention or understanding of the concepts. All tests were administered by the
special education teacher. Test scores were recorded and graphed and both baseline and intervention phases were compared.
Chapter IV

Results

The purpose of this study was to examine the effects of a trimotoric model of language instruction using the *Three to Get Ready* program on the language development of preschool children with disabilities.

The plan of this study was to examine the need to stimulate other input modes for disabled children and to know the most effective and efficient methods to teach language skills.

The data pertaining to this plan is presented in the form of both line and bar graphs. Figure 2 presents the children's scores in bar graph format. Figure 3 presents the children's scores in line graph format. Phase I represents the baseline data and Phase II represents the data during the intervention period. The following graphs demonstrate the data that was collected over a twelve-week period. Both receptive and expressive language skills were assessed.
Figure 1: Children’s scores in bar graphs

![Bar graphs showing scores over weeks for Phase I and Phase II, with separate bars for receptive and expressive responses.](image)
Figure 1: Children’s scores in bar graphs

Phase I

Phase II

weeks

% correct responses

Receptive  Expressive

1 2 3 4 5 6 7 8 9 10 11 12

1 2 3 4 5 6 7 8 9 10 11 12
Figure 2: Children's scores in line graphs
Summary

Figure 3 showed the results of the children's receptive and expressive language scores on the post test each week. Overall, the children's receptive language scores generally tended to show a higher increase than the expressive language scores.

The receptive scores increased for each child during certain weeks (weeks 1, 2, 3, 5). During those weeks these concepts were taught: "open/closed", "up/down", "in/out", "big/little." Children who had prior knowledge of a concept increased more consistently than those who had limited prior knowledge. Rarely did a child's receptive scores decrease as a result of the program and reflect in the post test.

The expressive scores showed limited progress. Students who initially had some expressive scores for a certain concept, generally showed an increase in verbalizations. Those who had a very limited vocabulary did not show much progress. The post test required a particular verbalization of the concept to be considered a correct response. If the child was not able to answer the "W" question with the correct word, such as "Where is the milk?"; "What is wet on the baby?", it was not marked as a correct response.
Summary

In this study, the effects of a trimotoric model of language instruction, the *Three to Get Ready* program was examined. It was felt that preschool children with disabilities would increase their understanding of basic concepts and verbalizations while involved in this program.

Four preschool handicapped children were participants in this study. Each child had significant delays in both receptive and expressive language. Cognitive delays were also present in all of the children.

This study extended over a 12-week period from January 13, 2003 to April 4, 2003, with each lesson lasting 45-60 minutes. At the beginning and end of the treatment period, each child was given a teacher-made test to gauge any improvement.

The results indicate that the intervention program generally did not lead to any significant increases in the language development or concept comprehension of those preschool children.

Interpretations

The data generated by the informal measure in this study seem to substantiate the conclusion that students identified as language delayed or communication impaired would not benefit from a trimotoric model of language instruction. However, the children who have higher cognitive skills did make some progress. This would imply that the program may have been too abstract for the children who had cognitive skills
below 18 months. Students 3 and 4 made gains in both receptive and expressive language and showed comprehension of more basic concepts. Students 1 and 2 are just beginning to use language and have vocabularies of about 10 words each. They are also functioning cognitively at about 10-12 months. The teacher-made test only allowed for verbalizations of the words for each concept. This counted as a correct answer. Students 1 and 2 have not incorporated these concepts into their daily language as of yet.

From this information, one would assume that the Three to Get Ready program was of little benefit to the children. There were many factors that seemed to hinder the success of the program. The fine motor component to the lessons was a major hindrance. The children were asked to comprehend and learn the lesson using a paper mitt or puppet. Children that are functioning at a cognitive level below 18 months need a truly “hands-on” approach. They must be able to use all of their senses when learning something new. The concept of “hard /soft” or “hot /cold” can not be presented using a paper mitt. Ideally, a three dimensional or a concrete object would have been more beneficial to use during the lesson.

The testing materials allowed for limited opportunities for success. Only verbalizations of the expected word could be counted as a correct response and the paper mitt was used to demonstrate their understanding. Again, a three dimensional or concrete object would have been more beneficial during the testing session.

The test did not allow for an adult’s prompting. Students who are functioning at a low level sometimes need a prompt to bring them closer to what is expected of them. A
prompting system or incorporation of sign language may be useful to allow children a chance for success.

Limitations

The limitations of this study, however, should be considered when reviewing the results. The treatment time was too short and was frequently interrupted. Ideally, a treatment period continuing until the end of the school year may have been more effective.

Another limitation was the fact that a heterogeneous group of children was used for this study. The children's ages and cognitive levels were too varying. A more homogeneous group (same age and cognitive levels) may present a clearer view of the program and the effects of this study.

Teacher effect may have also influenced the effects of this study. An occupational therapist and speech therapist were available two days out of the week. The special education teacher and two aides presented their lessons on the remaining days of the week. The different presentations may have had some effect.

Unfortunately, there is limited research that has been conducted surrounding a trimotoric approach to learning. This in conjunction with a limited sample population warrants further research to be done to substantiate any results.

Recommendations

There should be further study in this area of language development for preschool children with disabilities. The researcher felt that the trimotoric approach is beneficial to children, but if this study were to be replicated, the intervention should be presented to children who are functioning at cognitive levels that are more similar in age. This would
provide a clearer vision of what the *Three to Get Ready* program offers. The treatment should extend for a longer period of time as well.
References


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Baltimore: Paul H. Brookes.
Kitchen Corners

Objective
To demonstrate an understanding of positional concepts open/closed

Materials
play kitchen
toy dishes, pots, pans, jars, bowls, spoons, ...  
cereal and other food boxes, egg cartons, ...

Vocabulary

<table>
<thead>
<tr>
<th>Open</th>
<th>Handle</th>
<th>Cabinet</th>
<th>Pot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closed</td>
<td>Refrigerator</td>
<td>Lid</td>
<td>Jar</td>
</tr>
<tr>
<td>Puppet</td>
<td>Stove</td>
<td>Dish</td>
<td>Bowl</td>
</tr>
</tbody>
</table>

Preparation
Place kitchen furniture and equipment in gross motor area.

Have scissors, paste, crayons, and activity mitt sheets available in fine motor area.

Arrange mirror in oral motor area.

Motor Tasks
Gross Motor
Open and stretch fingers.
Close and curl fingers.
Open the classroom door to enter kitchen area.
Close the classroom door.
Open/CLOSE the doors on play kitchen equipment (stove, cabinets, and so on).
Open/CLOSE flaps on food item boxes.

Fine Motor
Close hands, palms touching.
Open hands, pinkies touching.

Distribute the picture page, manipulatives (eyelids), and song sheet.
Apply paste to top and sides of song sheet.
Press the picture sheet over the song sheet to form the puppet (the activity mitt, with opening at the bottom).
Cut/Color/Paste the top section of the eyelids on the puppet.

Oral Motor
Open your lips.
Close your lips.
Show your teeth and bite closed.
Show your closed teeth and open wide.
Close your mouth and say, "Mmmmmm."
Open your mouth and say, "Ha-ha-ha!"

Conclusion
Sing song.
Practice all week.
Record the Criterion-Referenced Test.
At end of week, send home the activity mitt.
<table>
<thead>
<tr>
<th>Objective</th>
<th>To demonstrate an understanding of directional concepts up/down</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials</td>
<td>Classroom slide, slide constructed of mats, appropriate school steps, toy vehicles, small blocks prepared as slides.</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>up steps/stairs, car, ball, down airplane, climb, crawl, slide truck, stretch, roll</td>
</tr>
<tr>
<td>Preparation</td>
<td>Set up steps, slides, and mat-and-block slides in gross motor area. Have toys nearby. Have paste, scissors, crayons, and activity mitt sheets ready in fine motor area. Arrange mirror in oral motor area.</td>
</tr>
<tr>
<td>Motor Tasks</td>
<td>Gross Motor: Walk up/down steps, Stretch arms up/down, Climb up the slide, Slide down the slide, Crawl up the mat slide, Roll down the mat slide, Slide the toys up/down the block slides.</td>
</tr>
<tr>
<td>Motor Tasks</td>
<td>Fine Motor: Point index finger up/down, Slide one hand up/down the opposite arm, Color/Cut/Paste the glove on the arm that is up, Color/Cut/Paste the glove on the arm that is down, Move crayon up and down to color the shirt.</td>
</tr>
<tr>
<td>Oral Motor</td>
<td>Point tongue tip out and up to nose, Point tongue tip out and down to chin, Touch tongue tip up on top teeth, Touch tongue tip down on bottom teeth, Sing the song tune, using &quot;La-la-la-la.&quot;</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Sing song, Practice all week, Record the Criterion-Referenced Test, At end of week, send activity mitt home.</td>
</tr>
</tbody>
</table>
Going Shopping

Objective To demonstrate an understanding of directional concepts in, out

Materials play food market
shopping cart (wagon, carriage, ...) play money
empty food containers change purse
doll card box as car
play food items doll
cash register empty bags

Vocabulary in cart money
out bag buy
food market purse shelf

Preparation Set up play store with items on display in gross motor area.
Have box (for a car), doll, and shopping cart nearby.
Have scissors, paste, crayons, activity mit sheets, change purse, and money available in fine motor area.
Arrange mirror in oral motor area.

Motor Tasks Gross Motor
Get in/out of car (box).
Walk in/out of market area.
Lift doll in/out of cart.
Place food items in/out of shopping cart.
Put food items in/out of bag.

Fine Motor
Make a circle with all five fingers; use thumb and index finger of opposite hand to form pincer grasp.
Use pincer grasp in/out of the circle.
Use pincer grasp to put money in/out of change purse.
Color/Cut/Paste the milk carton in cart.
Color/Cut/Paste the cookie box in square on the shelf.
Place hand in/out of finished activity mitt.

Oral Motor
Open mouth and stick tongue out of mouth.
Put tongue in mouth and close mouth.
Puff cheeks out with air.
Suck cheeks in and hold between molars.
Close mouth and breathe in/out through nose.

Conclusion Sing song.
Practice all week.
Record the Criterion-Referenced Test.
At end of week, send activity mitt home.
Airplane Action

Objective To demonstrate an understanding of directional concepts on/off

Materials classroom chairs
toy planes
blocks as plane steps
balance beam (or masking-tape line) for "runway"

Vocabulary on pilot wings
off trip uniform/clothes
airplane fly hat

Preparation Place balance beam (or masking tape) as plane runway in gross motor area. Place chairs and toy planes near runway.
Have scissors, crayons, paste, and activity mitt sheets ready at fine motor table.
Arrange mirror and chairs at oral motor area.
Explain to the children, "Let's pretend that we are at the airport, where we can see planes and the people who fly the planes, who are called pilots."

Motor Tasks Gross Motor
Sit on chair and extend arms as wings.
Pop up and "take off" as airplanes.
"Fly" toy planes on and off table or floor.
Walk as airplanes on the runway.
Jump off the runway.

Fine Motor
Stand index and third finger as "legs" on opposite palm.
Jump fingers off palm.
Color/Cut/Paste front and back of hat together.
Put hat on and off pilot's head.
Draw a smile on pilot's face.

Oral Motor
Place tongue on/off upper lip.
Place tongue on/off lower lip.
Place tongue on/off upper teeth.
Place tongue on/off lower teeth.
Pop tongue on/off top (roof) of mouth.

Conclusion Sing song.
Practice all week.
Record the Criterion-Referenced Test.
At end of week, send activity mitt home.
Shapes 'n Sizes

Objective To demonstrate an understanding of quantitative concepts big little

Materials big and little toys
string or rope
masking tape

Vocabulary big crawl mouth little jump
eyes circle face nose square
shape body

Preparation In gross motor area, use string or rope to make big and little circles; use tape to make big and little squares. Have big and little toys nearby. Place scissors, crayons, paste, and activity mitt sheets in fine motor area. Arrange mirror in oral motor area. Explain to the children, "We are going to play with shapes and things of different sizes."

Motor Tasks Gross Motor
Stretch body to be big.
Crouch down to be little.
Run around the big circle.
Jump in the little circle.
Crawl on the big square.
Sit on the little square.
Place a big toy in the little square.
Place a little toy in the big circle.
Place a little toy in the big square.
Place a big toy in the little circle.

Fine Motor
Make a big ball with both hands.
Make a little ball with thumb and index finger of one hand.
Trace a big square for puppet's body.
Color/Cut/Paste big circles for puppet's buttons.
Trace little circles for puppet's eyes and nose.
Give puppet a big smile.

Oral Motor
Open mouth to make a big circle.
Lick around big, opened mouth.
Pucker lips to make small circle.
Throw a kiss with small, puckered lips.
Say "ah" with big, opened mouth.
Say "oo" with small, puckered lips.

Conclusion Sing song.
Practice all week.
Record the Criterion-Referenced Test.
At end of week, send activity mitt home.
Tubby Time

Objective
To demonstrate an understanding of the qualitative concepts wet: dry

Materials
| Plastic tub | Towels |
| Washcloths | Water  |
| Sponges   | Washable dolls or toy animals |

Vocabulary
| Wet   | Water |
| Dry   | Sponge |
| Wash  | Towel |
| Tub   | Doll  |
| Dip   | Squeeze |

Preparation
Place washable dolls or toy animals near the tub. Fill tub with water. Place tub in gross motor area. Have washcloths and towels available nearby.
Cut sponges into small, individual pieces. Place them in fine motor area. Have small cups of water, scissors, crayons, paste, and activity mitt sheets ready on fine motor table.
Place mirror and cups of water in oral motor area.
Explain to the children, "We are going to play 'bath time.'" Label all items with the children.

Motor Tasks

Gross Motor
- Dip one hand in water.
- Touch face with wet hand.
- Touch face with dry hand.
- Wash doll (or toy animal) with wet washcloth.
- Dry doll (or toy animal) with dry towel.

Fine Motor
- Grasp dry sponge piece between thumb and forefinger.
- Dip sponge in cup of water and squeeze wet sponge.
- Squeeze glue on Tubby Baby's body. Feel the wet glue.
- Color/Cut/Paste the dry towel on Tubby Baby's body.

Oral Motor
- Open mouth, stick out tongue, and breathe in/out rapidly (pant) to create dry mouth.
- Take a sip of water and swish in mouth, lips sealed, to create a wet mouth.
- With lips sealed, swallow.
- Lick finger to wet.
- Blow finger to dry.

Conclusion
Sing song.
Practice all week.
Record the Criterion-Referenced Test.
At end of week, send activity mitt home.
Moving Day

Objective
To demonstrate an understanding of the directional concepts push/pull

Materials
large and small chairs
large and small empty cardboard boxes
masking tape
small pull-toy

Vocabulary
push moving different place
pull furniture boxes tape

Preparation
Arrange “moving day” items in the gross motor area. Clear a different area into which items can be moved.
Have masking tape, scissors, crayons, paste, and activity mitt sheets available in the fine motor area.
Arrange mirror in the oral motor area.
Explain to the children, “We are going to move things to a different, new place.” Discuss that very large things should be pushed and smaller things can be pulled.

Motor Tasks
Gross Motor
Push a large chair to the new place.
Pull a small chair to the new place.
Push a large box to the new place.
Pull a small box to the new place.
Pull a small toy to the new place.

Fine Motor
Hold up one hand. Use your other hand to push it away from your body.
Hold up your hand again. Now use your other hand to pull it toward your body.
Color/Cut/Paste lid on box.
Pull a piece of tape off the roll.
Push tape on the box to close the lid.

Oral Motor
Push your tongue tip against the inside of your cheek.
Hold your chin, pull down, and open your mouth wide.
Hold your chin, push up, and close your mouth.
Place your tongue over the front of your top teeth and pull in.
Place your tongue against the back of your bottom teeth and push out.
Push your tongue against the roof of your mouth, pull it down, and “pop” your tongue.

Conclusion
Sing song.
Practice all week.
Record the Criterion-Referenced Test.
At end of week, send activity mitt home.
Ball Game Fun

Objective
To demonstrate an understanding of the positional concepts sitting: standing.

Materials
- rows of chairs
- masking tape
- soft ball

Vocabulary
- sitting ball cheering kick
- standing game roll play catch

Preparation
Arrange chairs as "bleachers" in a row in front of an area large enough for children to play ball. Place masking tape to form an X on the floor at each end of the ball-playing area. Place the ball on the floor near one X.

Have scissors, paste, crayons, and activity mitt sheets ready at fine motor area.

Arrange mirror at oral motor area.

Explain to the children, "We are going to go to a ball game." Tell children that some will watch and others will play. Select two players to sit on each X. Have remaining children sit on the chairs to watch.

Motor Tasks
Emphasis is on rest posturing of mouth and proper posture while sitting or standing.

Gross Motor
- Sit on chairs and watch the ball game.
- Sit on X, and roll the ball to your partner.
- Stand up and cheer for the players.
- Stand on X, and kick the ball to your partner.
- Stand and catch ball, hold the ball, and sit down.

Fine Motor
- Place pointer and middle fingers on your opposite open palm, like legs standing.
- Dangle pointer and middle fingers as the rest of your palm "sits" on the opposite open palm.
- Color/Cut/Paste the ball in the player's hand.
- Color the other player's shirt and pants green.
- Color the girl's dress blue.
- Color/Cut/Paste the hot dog in the watcher's hand.

Oral Motor
- Stand up straight with mouth closed.
- Sit up straight with mouth closed.
- Breathe in/out while standing with mouth closed.
- Breathe in/out while sitting with mouth closed.
- Close teeth and say "ssss," then say "ssstanding" and "ssssitting."

Conclusion
- Sing song.
- Practice all week.
- Record the Criterion-Referenced Test.
- At end of week, send activity mitt home.
Touch and Tell

Objective
To demonstrate an understanding of the qualitative concepts soft, hard.

Materials
- hard storage box
- soft cloth bag or pillowcase
- soft and hard blocks
- soft and hard balls
- soft and hard animal toys and dolls
- cotton balls
- dry macaroni pieces

Vocabulary
- hard
- bag
- touch
- drop
- throw
- soft
- box
- feel
- roll
- squeeze

Preparation
Place hard box and soft bag in gross motor area. Place hard and soft blocks, balls, and toys in the matching container (for example, a soft ball in the soft bag).
Have cotton balls, macaroni pieces, scissors, crayons, paste, and activity mitt sheets in fine motor area.
Arrange mirror in oral motor area.

Motor Tasks
Gross Motor
Get hard block from hard box and drop it.
Get soft block from soft bag and drop it.
Get hard ball from hard box and roll it.
Get soft ball from soft bag and throw it.
Get soft animal from soft bag and hug it.
Get hard toy from hard box and knock on it.

Fine Motor
Use pincer grasp and squeeze soft cotton ball.
Use pincer grasp and squeeze hard macaroni.
Color Ricky Raccoon's hard claws.
Color/Cut/Paste Ricky Raccoon's soft tail.
Paste soft cotton ball on Ricky Raccoon's hand.
Paste hard macaroni on Ricky Raccoon's other hand.

Oral Motor
Move tongue tip back and forth across soft lips.
Move tongue tip back and forth across hard teeth.
Tickle tongue tip back and forth across hard palate.
Move tongue tip back and forth, poking soft inner cheeks.
Close hard teeth together.
Close soft lips together.

Conclusion
Sing song.
Practice all week.
Record the Criterion-Referenced Test.
At end of week, send activity mitt home.
Tiny Tot's Workout

Objective
To demonstrate an understanding of the qualitative concepts slow/fast

Materials
exercise music with slow tempo
exercise music with fast tempo
edible items

Vocabulary
slow exercise bend walk hop
fast stretch run crawl

Preparation
Clear a large area as exercise floor. Have music ready to play. Use appropriate music for exercise speed. Have scissors, paste, crayons, and activity mitt sheets ready at fine motor area.
Arrange mirror at oral motor area. Have edible items ready there.
Explain to the children, “We are going to exercise by moving our bodies.” Demonstrate slow and fast moving with a common exercise, such as walking or running. Be certain to do bending exercises slowly to avoid injury.

Motor Tasks
Gross Motor
Walk very slowly. (Exaggerate movement)
Run very fast. (Exaggerate movement)
Clap and stretch out your arms slowly/fast.
Lie on your back and kick your feet slowly/fast.
Stand and bend down to toes slowly.
Stretch arms over head and shake hands very quickly (fast).
Shake hands from wrist slowly/fast. (Exaggerate movements)

Fine Motor
Color walker's clothes blue. Use slow strokes.
Color runner's clothes red. Use fast strokes.
Color/Cut/paste walker's shoes.
Color/Cut/Paste runner's sneakers.

Oral Motor
Say “ma-ma-ma” slowly, then fast.
Close your mouth, and breathe in and out slowly, then fast.
Say “pa-pa-pa” very slowly.
Bounce lips quickly by saying “baby raspberries.”
Chew an edible item slowly. (Closed-mouth posture)

Conclusion
Sing song.
Practice all week.
Record the Criterion-Referenced Test.
At end of week, send activity mitt home.
**Stop 'n Go**

**Objective**
To demonstrate an understanding of directional concepts stop/go

**Materials**
toy vehicles
ride-on toys, if available
pictures of vehicles

**Vocabulary**
<table>
<thead>
<tr>
<th>stop</th>
<th>pretend</th>
<th>car</th>
<th>slow</th>
</tr>
</thead>
<tbody>
<tr>
<td>go</td>
<td></td>
<td>fast</td>
<td>traffic light</td>
</tr>
</tbody>
</table>

**Preparation**
Have ride-on and toy vehicles in large gross motor area. (More space than usual may be needed for ride-on vehicles.)
Have scissors, crayons, paste, and activity mitt sheets on fine motor table.
Arrange mirror in oral motor area.
Explain to the children, “We are going to play. Listen carefully to what the grown-ups tell you to do.”

**Motor Tasks**

**Gross Motor**
Run and imitate fast-moving racing cars.
Walk and imitate slow-moving buses.
Stop/Go on teacher’s command.
Stop/Go with ride-on vehicles.
Play with toy vehicles. Follow stop/go commands.

**Fine Motor**
Hold hand up in stop position.
Wave hand in go position.
Clap hands, following stop/go commands.
Color bus to stop/go commands.
Color/Cut/Paste the traffic light.

**Oral Motor**
Make vehicle noises (beep, vrrroom, zoom, rrrr), following stop/go commands.
Hum tune for song on activity mitt, following stop/go commands.
Blow on palm at go command. Turn palm into stop position at stop command.
Blow air through lips making bouncing movement as motor sound, following stop/go commands.

Sing song.
Practice all week.
Record the Criterion-Referenced Test.
At end of week, send activity mitt home.
Obstacle Course

Objective
To demonstrate an understanding of the directional concepts over-under

Materials
balance beam  jump rope
chairs  tables

Vocabulary
over  jump  creep  table
under  climb  roll  chair
blocks  ball  jump rope  balance beam

Preparation
Set up objects in gross motor area in a progressive line as follows: large table, small table, jump rope, balance beam, large chair, small chair.

Have scissors, paste, crayons, and activity mitt sheets ready at fine motor table.

Arrange mirror and chairs in oral motor area.

Explain to the children, “We are going to move in two special ways. We can go over and under all the things we see.” Demonstrate each movement.

Motor Tasks

Gross Motor
Crawl under the large table.
Climb over the small table.
Roll under jump rope. (Facilitators elevate the jump rope)
Jump over balance beam.
Creep under large chair.
Climb over small chair.

Have children repeat the course, this time manipulating a large ball over and under the obstacles.

Fine Motor
Hold your fist in front of body. Have opposite hand “fly” over fist.
Hold your arm in front of body, palm down. Have opposite hand “fly” under palm.
Color/Cut/Paste arms/hands over Jim Ball.
Color/Cut/Paste legs/feet under Jim Ball.
Color/Cut/Paste eyebrows over eyes.
Draw mouth under nose.

Oral Motor
Hold finger parallel in front of lips.
Stretch tongue tip out and over finger.
Stretch tongue tip out and under finger.
Test fingertip on bottom teeth, and place tongue over finger.
Test fingertip on top teeth, and place tongue under finger.
Stretch tongue tip under nose.

Sing song.
Practice all week.
Record the Criterion-Referenced Test.
At end of week, send activity mitt home.
APPENDIX B
**Criterion-Referenced Test**  
**Concepts: Open/Closed**

<table>
<thead>
<tr>
<th>Use activity mitt.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have one eyelid open, the other closed.</td>
<td></td>
</tr>
</tbody>
</table>

**Receptive**
- Touch the open eye.
- Touch the closed eye.

**Expressive**
- **Point to opened eye. Ask,**  
  How does this eye look?  
- **Point to closed eye. Ask,**  
  How does this eye look?

**Comments**
Criterion-Referenced Test
Concepts: Up/Down

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Record + or - Responses</th>
</tr>
</thead>
</table>

**Receptive**
- Point to the hand that is up.
- Point to the hand that is down.

**Expressive**
- *Raise hand; ask,*
  - *Where is my hand?*
- *Lower hand; ask,*
  - *Where is my hand?*

**Comments**

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## Criterion-Referenced Test
### Concepts: In/Out

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
<th>Record + or - Responses</th>
</tr>
</thead>
</table>

### Receptive
- Touch something in the cart.
- Touch something out of the cart.

### Expressive
- Where is the milk?
- Where is the cookie box?

### Comments

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**Criterion-Referenced Test**
**Concepts: On/Off**

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
</table>

| Record + or - Responses |

**Receptive**

*Put hat on pilot; say,*  
Touch something that is on the pilot.

*Take hat off pilot; say,*  
Touch something that is off the pilot.

**Expressive**

*Put hat on pilot; ask,*  
Where is the pilot's hat?

*Take hat off pilot; ask,*  
Where is the pilot's hat?

**Comments**

*(cut on dotted line)*
# Criterion-Referenced Test

## Concepts: Big/Little

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Receptive

- Touch a big shape.
- Touch a little shape.

## Expressive

- What size are the eyes and nose?
- What size is the body?

## Comments

![Two circles](image)
## Criterion-Referenced Test
**Concepts: Wet/Dry**

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Receptive</th>
<th>Record + or - Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Touch something wet.</td>
<td></td>
</tr>
<tr>
<td>Touch something dry.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expressive</th>
<th>Record + or - Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is wet on baby?</td>
<td></td>
</tr>
<tr>
<td>What is dry on baby?</td>
<td></td>
</tr>
</tbody>
</table>

### Comments
<table>
<thead>
<tr>
<th>Receptive</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Push the box.</td>
<td></td>
</tr>
<tr>
<td>Pull the box.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expressive</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Put activity mitt on child’s hand.</em></td>
<td></td>
</tr>
<tr>
<td><em>Pull child’s hand; ask,</em></td>
<td></td>
</tr>
<tr>
<td>What am I doing?</td>
<td></td>
</tr>
<tr>
<td><em>Push child’s hand; ask,</em></td>
<td></td>
</tr>
<tr>
<td>What am I doing?</td>
<td></td>
</tr>
</tbody>
</table>

Comments
**Criterion-Referenced Test**

**Concepts: Sitting/Standing**

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
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<tbody>
<tr>
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</table>

<table>
<thead>
<tr>
<th>Record</th>
<th>+ or - Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Receptive
- Touch the child sitting down.
- Touch a child standing up.

### Expressive
- Who is sitting?
- Who is standing?

### Comments
Criterion-Referenced Test
Concepts: Hard/Soft

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
<th>Record + or - Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Receptive**
- Touch something soft in Ricky's hand.
- Touch something hard in Ricky's hand.

**Expressive**
- What is Ricky holding that is hard?
- What is Ricky holding that is soft?

**Comments**
| Name | Date |

**Receptive**
- Touch the child walking slowly.
- Touch the child running fast.

**Expressive**
- How is the child walking?
- How is the child running?

**Comments**
**Criterion-Referenced Test**  
*Concepts: Stop/Go*

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Receptive</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Make the bus go.</td>
<td></td>
</tr>
<tr>
<td>Make the bus stop.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Expressive</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Manipulate activity mitt, then stop; ask, What did I make the bus do?</em> <em>(stop)</em></td>
<td></td>
</tr>
<tr>
<td><em>Manipulate activity mitt. Without stopping, ask, What did I make the bus do?</em> <em>(go)</em></td>
<td></td>
</tr>
</tbody>
</table>

**Comments**

![Diagram](image-url)
## Criterion-Referenced Test

**Concepts: Over/Under**

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
</table>

| Record + or - Responses |

### Receptive

- Put Jim Ball over your head.
- Put Jim Ball under the table.

### Expressive

- Where are Jim Ball’s hands?
- Where are Jim Ball’s feet?

### Comments