Study of language training methods and techniques for the language-delayed trainable mentally retarded child

Sandra May

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A STUDY OF LANGUAGE TRAINING METHODS AND TECHNIQUES
FOR THE LANGUAGE-DELAYED TRAINABLE MENTALLY
RETARDED CHILD

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by
Sandra May

A RESEARCH PAPER
SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
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Milwaukee, Wisconsin
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This research paper has been approved for the Graduate Committee of Cardinal Stritch College by

[Signature]
(Advisor)

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CHAPTER I

INTRODUCTION

Recognizing the need for special programs for handicapped individuals, the State of Wisconsin passed legislation, known as Chapter 89, in August, 1973. This legislation mandates appropriate services to children three to twenty-one years of age in need of exceptional education.

The total impact that Chapter 89 will have in the field of special education cannot yet be fully grasped. However, in its first year, it has played an integral part in program development in exceptional education. One of these special programs is designed for the young trainable mentally handicapped in the Milwaukee Public Schools.

Many children previously ineligible for school placement are now entering the public schools. Some mentally handicapped children are beginning their education as early as three years of age.

The young trainable mentally retarded student frequently exhibits deficits in many areas, one of these being language function. Language development is delayed in most of these children. Spreen, in her research, found that
about ninety per cent of the children in the trainable IQ range, 21-50, are impaired in their language development.\textsuperscript{1}

\textbf{Statement of the Problem}

The writer will review approaches to and methods and techniques of stimulating and developing language in the language-delayed, trainable mentally handicapped child.

\textbf{Purpose of the Study}

The purpose of this review of research is to investigate methods and techniques of language training for the young language-delayed, low-functioning mentally handicapped child. By reviewing the research and presenting the findings regarding language training, the writer will attempt to present information regarding various language programs which teachers could utilize in implementing appropriate language training for the language-delayed mentally handicapped child in the classroom.

\textbf{Definition of Terms}

Before reviewing the research, the writer finds it necessary to clarify some terms.

\textsuperscript{1}Otfrid Spreen, "Language Functions in Mental Retardation: A Review," \textit{American Journal of Mental Deficiency}, LXIX (1965), p. 484.
Mental Retardation refers to subaverage general intellectual functioning which originates during the developmental period and is associated with impairment in adaptive behavior.\(^2\)

Trainable Mentally Retarded or Handicapped children refers to individuals in the IQ range of 21-50.\(^3\) These children can benefit from training in self-care and social skills. They usually do not progress beyond the second grade level in academic skills.

Language is the ability to express ideas and concepts, verbally or through nonverbal modes of communication.\(^4\)

Operant Conditioning is based on the principle that behavior is a function of its consequence i.e., an event that immediately follows another event in time. A response is correlated with reinforcement. The application of a positive consequence which immediately follows a response is called positive reinforcement. If a positive consequence is withdrawn, this is a negative reinforcement.\(^5\)

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\(^3\) Spreen, op. cit., p. 484.


Reinforcement is used to increase the frequency of occurrence of a response. It involves presentation of a positive reward or removal of a negative reinforcer.

Summary

New language training programs must be developed for the young mentally handicapped child. These programs can be executed by the classroom teacher toward the goal of meaningful communication for the child. Early education and training, and stimulating school experiences can greatly enhance the attainment of functional communicative language.
CHAPTER II

REVIEW OF RESEARCH

Before investigating the various methods and techniques of language training, the writer will briefly describe language acquisition, the components of language, and implications regarding language training.

Language Acquisition

Language growth begins long before the child is able to correctly articulate a word. Communication may, in a non-verbal pattern, range from a simple gesture to an intricate pantomime; verbally, it may be as simple as a meaningful vocalization or as complex as abstract speech.\(^1\)

Part of language growth is the establishment of certain processes. Strazzulla indicates that for the child, this growth involves a series of functions.

1. Exploring in detail his immediate environment.
2. Listening and analyzing noises, sounds, and words.
3. Thinking about, and organizing himself around the stimuli.
4. Communication with others about these stimuli through the use of gestures, pictures, sounds, speech, etc.\(^2\)


\(^2\)Ibid., p. 511.
These developmental steps are extremely important in language acquisition.

Myklebust states that the child acquires language, he is not born with language. In order to acquire language, however, Myklebust contends that the child needs three basic types of integrity.

The first integrity is that of the peripheral nervous system. If the peripheral nervous system is impaired, as in a child who does not hear normally, the child will not acquire language normally.

The second integrity is in the central nervous system. A symbolic language disorder might be present if the central nervous system is defective. This language disorder is known as aphasia.

The third type of integrity is emotional. Emotional disorders reflected in delayed, impaired or idiosyncratic language include autism, schizophrenia, and psychic deafness.

According to Myklebust, the child will acquire language only when he has "adequate integrity of the peripheral nervous system, the central nervous system, and of psychological processes."³

Components of Language

Language can be categorized as inner language, receptive language, and expressive language.

Inner language is the symbol system used for thinking, memory, imagination, reason, etc. At the lowest genetic level it is a simple rudimentary association between the word and concrete experiences, such as associating the word 'mama' with feeding and generalized feelings of wellbeing.⁴

Receptive language involves two processes. One process is the receiving of the auditory and visual stimuli. The second process is the understanding of the received stimuli. A child lacking adequate integrity would be unable to interpret sensory images due to misperception of sensory data. He would not be able to comprehend the ideas of others.⁵

Expressive language is the symbol system used to communicate ideas to others.

Language development follows a sequential order. First, inner language must develop. Second, receptive language develops, and lastly, expressive language develops. Inner and receptive language must develop before a child will be able to talk.⁶

⁴Ibid., p. 164.
⁶Myklebust, op. cit., p. 164.
Implications Regarding Language Training

One of the implications or limitations regarding the establishment of a language training program for the young trainable mentally handicapped child relates to the population involved. This population includes children with various and diverse impairments and disorders. A child may be defective in one integrity or all three. Individual needs must be met.

Second, the child is not always able to attend, or "pay attention". At times a child is unable to "inhibit the effects of extraneous stimuli," thus he cannot receive what is presented to him adequately.7

Third, behavior problems do exist and need to be controlled in order for the child to begin the learning process. Disruptive and inappropriate behaviors must be eliminated.

Approaches to Teaching

It should be kept in mind that the goal in language development for the trainable mentally handicapped child is not perfect speech, but functional, communicative language. Kirk states that language training should include the development of speech and the understanding of

7Smith, op. cit., p. 67.
verbal concepts. It also should include listening skills, discussing pictures and other activities which are familiar to the children.  

Reception ----------- Association ----------- Expression 
and Integration 

Input 
Perception 

Auditory 

Visual 

Output 
Conceptual 

Verbal 

Motor 

Figure 1.—A Learning Process Model

Every opportunity should be afforded the young mentally handicapped child to develop language so that he may communicate effectively and attain a degree of self-sufficiency commensurate with his potential. He should develop oral communication skills needed for daily living. In order to reach this goal, early education at three years of age or before is of vital importance.

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8 Kirk, op. cit., p. 232.
Looking to the future of the young trainable child, Goldstein asserts,

When we look at the working and the nonworking adult retardates, it becomes clear that the major differences are in the extent to which they have developed perceptual, motor, and language skills. Since we can be confident that these skills are only minimally self-generated in the severely retarded, it is clear that they must be integrated into the program of training at an early stage in the child's life.\(^9\)

Richardson indicates that speech and language therapy for the retarded ordinarily begins when the child is between four to six years of age. However, normal children usually start talking when they are between twelve and eighteen months of age. This development takes place during the peak period of sensory motor learning. Richardson asks, "Why must the retarded child be put off?"\(^10\) We must begin educating the retarded at an early age.

Molloy indicates that we cannot accelerate the maturation process of the child; however, we can structure and manipulate the environment and circumstances which will stimulate the need for communication.\(^11\)


\(^11\)Molloy, op. cit., p. 21.
Concomitant with the process of maturation is the observed sequence of language development. Basically, the problem is to structure readiness for producing speech by perceptual training and to proceed to induce speech on a conceptual level.

The structured perceptual training progresses through four stages:

1. Learning to listen through attention-compelling stimulations
2. Listening and reacting to sound
3. Listening and responding to sound
4. Listening and producing an appropriate response

As the child's language evolves through his broadening perception in orderly sequence from concern with self, to things, to people, it is essential to select materials to conform:

1. Within this orderly sequence—the child's social concern for himself, for things, for people
2. Within the limits of his motor, kinesthetic, visual, and auditory development
3. Within the realm of the child's own possible experience
4. With his implicit needs for self-protection

Richardson, like Molloy, contends that the retarded child must begin his language development program with the preverbal skills. He should be involved in muscular education such as walking heel-to-toe along a line, playing with bean bags, and playing ball. The preverbal skills also include the everyday independent functioning activities like self-help skills, washing hands or polishing shoes. Many Montessori materials are used for "sense training", as well. Each sense is trained in isolation. Richardson states

"When we 'train' the senses, we are not trying to make the child see better; we are helping him to know what he sees." 13

Language should encompass every classroom activity. Taking a gestalt approach, Bender teaches language with as much of a normal whole structure as possible. Her goal being normalcy or as near normalcy as possible, Bender guides and trains handicapped children beginning with the social skills. She states,

The most immediate value our program can offer these children is the training in adequate social situations. By beginning this training early while we can still move slowly and pace the child's normal developmental rate, the well-known distractibility and disinhibition exhibited by these children is greatly reduced. 14

When the child is ready for therapy, the problems of being inattentive or unresponsive are reduced. The child is usually cooperative and is ready to learn.

Every lesson and activity is accompanied by correctly structured language. The teacher thus provides a stimulating environment for the development of receptive language. The lessons and materials involved help make the child more aware, alert his perception, encourage concept development and help the child become more organized. 15

15 Ibid., pp. 537-540.
Smith, on the other hand, emphasizes that a clinical approach in teaching the retarded will result in the occurrence of learning at a level and rate which is more consistent with their capabilities. The child's difficulties are diagnosed, an individualized program is prescribed for him, and the child is given appropriate language training at his level. 16

Similarly Wiseman indicates that language development should be an on-going, diagnostic-prescriptive process. It should not be taught as an isolated subject, but should be incorporated into all areas of the educational program. 17

A well-functioning developmental language program may serve as a diagnostic device. The teacher should systematically introduce activities designed to enrich the five language processes. Types of difficulties encountered by each child should be carefully noted. After an area of disability is identified, the teacher must determine the degree of disability or the level at which the child can perform successfully. 18

The teacher should note areas of disability and determine the level of the child's functioning. Remediation


18 Ibid., p. 21.
is introduced in order to alleviate the deficit. However, it is important that this be an on-going process. Continuous evaluation is necessary if the remediation is to be effective.

Wiseman examines five processes within the language model.

I. Understanding or decoding: Decoding is the ability of the child to gather information from the environment and to understand what he sees and hears.

II. Association of ideas: The association process is used while manipulating concepts to form new ideas.

III. Expressing ideas or encoding: Encoding refers to the ability to generate and express ideas.

IV. Automatic or closure processes: The fact that the child is a part of an environment that contains large numbers of consistent redundancies and the fact that his central nervous system is structured so that his behavior takes these repetitions into account describe this important accidental, non-purposeful acquisition of the subtleties of the environment.

V. Memory: Both the auditory and visual channels have general and sequential memory components. General memory refers to global, gross forms of retaining information, such as remembering the content of a story or general idea of a television program. Sequential memory is involved in remembering things presented in a specified order, such as the letters of a word.

Lovaas, Bricker and Bricker, Sloane, Johnston, and Harris, have demonstrated that operant conditioning can be used successfully in language training of the mentally handicapped child.

Lovaas, working with the mute schizophrenic child, used a step by step procedure, beginning with the establishment of the imitation of vocal sounds to develop speech.

\[\text{i}^9\text{Ibid., pp. 21-24.}\]
in the mute child. He used four steps in his procedure:

1. The child was rewarded for any vocal response.
2. The child was rewarded only if he vocalized within six seconds of the trainer's vocalization.
3. In this step, the child was rewarded only if he matched the trainer's vocalization.
4. The child had to discriminate between an old and new sound.

After an intensive training program in which the child mastered imitation, he then began the second part of the program wherein he was taught to use language appropriately.20

Lovaas found "that reward immediately following correct imitative behavior (and withholding of reward following incorrect responding) is a crucial variable in maintaining imitative behavior. It was the reward given for imitative behavior which was crucial to learning."21

Sloane, Johnston, and Harris state that,

The importance of maintaining precise and consistent contingencies for responses cannot be overstressed. This has been the most important aspect in our training people to do speech work. 'Rewarding' desirable behavior is not a new concept, but maintaining a precise, consistent and immediate relation between a


21 Ibid., p. 707.
specific verbal response and its consequence leads to entirely different results from the general idea of 'using rewards'.

Bricker and Bricker used standard techniques of operant conditioning in training severely language handicapped children. Their procedure included an audiometric evaluation to test the child's level of hearing. Using programmed equipment, the child was taught to respond to sound, light, and reinforcing stimuli in a testing area. Once the hearing level was established, the child was trained in receptive vocabulary.

In receptive vocabulary training, the child was trained to respond appropriately to objects, people and events. The child was placed in a two-choice situation and was rewarded immediately if he responded correctly in his choice of objects, such as pointing to a cow when given the verbal cue, "cow".

The third step in this language training program is imitation. Bricker and Bricker state that "imitation is

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probably the easiest means for building language production responses into the repertoire of children with severe language handicaps." The child, in a gradual, step by step procedure, is trained to imitate motor movements, such as, stepping on a board, or putting his hands on his head. After the child responds appropriately and has learned to imitate one motor movement, a new and different movement is introduced. Once the motor movements have been learned, the language trainer moves on to speech sounds, words, phrases, and sentences.

Step four is naming. Bricker and Bricker found that a child who is able to respond to words by selecting objects and object classes and who is also able to imitate a number of words can learn to name objects, events and people.

Risley and Wolf suggest the selection and use of functional words and phrases regarding things that are in the child's surroundings. When a child is in the naming stage, he should be taught the names of things in his environment so the names may be frequently repeated and used throughout the day.

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24 Ibid., p. 106.
25 Ibid., p. 108.
Individual language needs of the language-delayed trainable mentally handicapped child can be met. Using the various methods and techniques, the child can be trained in communication skills. Perfect speech is not the language trainer's goal. The goal is for the child to function adequately in order to make his needs known and for him to communicate with his family and friends.
CHAPTER III

SUMMARY AND CONCLUSION

The writer has reviewed various approaches to language development. Success has been evident. Through research, it has been found, that developmental programs, clinical and therapeutic programs can alleviate or improve language defects in children.

The writer has examined a few of the methodological techniques involved in language training.

The developmental approach to language can encompass all classroom activities. Language is not an isolated subject. It can be incorporated into every area and into every situation in the classroom. Enriching the child's environment and providing more actual experiences will enhance the development of receptive and expressive language skills.

The clinical approach, being somewhat more structured in a sense, requires more formal evaluative testing situations. The child must be tested to determine his level of functioning in order to remediate any deficits. This, of course, is done along with classroom teacher
evaluations. Problem areas must be diagnosed and a new program must be prescribed.

The therapeutic approach, in some cases, can be extremely structured and rather intense. The language trainer must be precise with his reinforcement techniques in order to attain the appropriate responses.

Not all children will be successful in their language development using the developmental, clinical, therapeutic, or other methods of language training. Success will vary with each child. However, for some children, it will mean being able to interact, to function and communicate effectively in the community.
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