1982

The Effects of Total Communication on the Expressive Language Behavior of Individuals Labeled Trainable Mentally Retarded

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The Effects of Total Communication on the Expressive Language Behavior of Individuals Labeled Trainable Mentally Retarded

(TITLE)

BY

Lenore Aebischer

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF

Master of Science in Special Education

IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY
CHARLESTON, ILLINOIS

1982
YEAR

I HEREBY RECOMMEND THIS THESIS BE ACCEPTED AS FULFILLING
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The Effects of Total Communication on the Expressive Language Behavior of Individuals Labeled Trainable Mentally Retarded

Lenore Aebischer
Eastern Illinois University

Abstract

The practice of total communication in language training for non-deaf individuals labeled mentally retarded has been guided by very little empirical evidence. Therefore, the purpose of this study was to determine whether the use of a total communication approach facilitates an increase in the frequency of expressive language behavior in children labeled trainable mentally handicapped. The three subjects studied, one male and two females, were selected on the basis of age and I.Q. They were enrolled in a self-contained, public school which was located in a rural area of Illinois. A multi-element baseline procedure was used. Stimuli were presented using an oral method and a total communication method in an elicited play situation. All expressive language behavior was then recorded via frequency recording. The results indicated that there was no significant difference in the frequency of expressive language behavior when a total communication approach or an oral approach was used. The setting, the duration and the stimuli may all have been factors which influenced the results. Further research in this area is warranted.

Dedication

I would like to dedicate this thesis

- to God who makes all things possible and who is always at the point of our every need.
- to Sally, Carol, Kathie and Terry for their love, encouragement, patience and prayers.
- to my parents and friends for their love and support.

Acknowledgements

I would like to thank my thesis committee chairman, Dr. Andrew Brulle and the other committee members, Mr. Robert Augustine and Dr. John Jacobs for their support, encouragement and time. They were always more than willing to help and guide me.

I would like to acknowledge Miss Julie Kehl who assisted with the research and Dr. Lowery who transported the video equipment. I greatly appreciate their time and effort in helping me complete this study.

A special thanks to the staff at Armstrong Center for supporting my research and allowing me to use their facility. Their cooperation and patience were appreciated.

I am grateful to the faculty and staff of the Special Education Department at Eastern Illinois University for their assistance and encouragement. I am happy that I had the opportunity to work with each one.

I am also thankful for the children who made this research possible.

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The Effects of Total Communication on the Expressive Language Behavior of Individuals Labeled Trainable Mentally Retarded

Public Law 94-142, the Education for All Handicapped Children Act, was enacted in 1975. The focus of this law is to insure that all children labeled handicapped are provided with an appropriate education. This includes the development of an individual educational plan for each student. This plan should reflect the unique needs of the individual and detail how the schools will meet those needs. One of the unique needs of individuals labeled trainable mentally handicapped is language development.

Individuals labeled trainable mentally handicapped characteristically exhibit a delay in language development and have difficulty in acquiring functional communication skills through the verbal mode. Since educators generally agree that communication is the most important of all human behavior (Weiss & Lillywhite, 1976), special educators and speech and language pathologists need to develop language training programs that will facilitate communication skills for individuals labeled trainable mentally handicapped.

Communication is defined as the use of language to maintain contact with others to gain information, give information and/or accomplish goals (Bloom & Lahey, 1978). Expressive language behavior is that which Bloom

and Lahey (1978) define as being any linguistic signal produced manually or vocally that is used for communication. Traditionally, special educators and speech and language pathologists have implemented language training programs with individuals labeled mentally retarded that focus on the development of the verbal modality.

The verbal modality may not be feasible for those children who lack certain cognitive and physiological abilities (Hollis & Carrier, 1975); therefore, alternative modes of communication should be investigated. One alternative mode is the use of signed and oral language, an approach known as total communication.

Mayberry (1976) has stated that many speech and language pathologists have shown an increased interest in the use of sign language as an alternative modality for establishing communication in clients for whom attempts at the verbal mode of language habilitation have failed. Caccamise, Hatfield, and Brewer (1978) suggested that a person who is unable to receive and/or express language in the verbal modality may be able to do so in a manual modality. Currently, many researchers have recommended the use of a total communication system as a potentially useful technique in teaching communication skills to individuals labeled mentally retarded (Bricker, 1972; Caccamise & Johnson, 1978; Gallender, 1981; Kirschner, Algozzine & Abbott, 1979; Kohl, Wilcox & Kaplan, 1978). However, very

few studies have evaluated this approach with individuals who are labeled mentally retarded and have hearing within normal limits.

Much of the impetus for research in the area of manual or total communication with individuals labeled mentally retarded has come from a study by Gardner and Gardner (1969). These researchers, over a 22-month experimental period, were successful in teaching a baby chimpanzee to use thirty signs in an appropriate and spontaneous manner. This study suggested the feasibility of using a manual communication system as a method of language training for individuals who demonstrate low cognitive functioning. Hollis and Carrier (1975) supported this notion by suggesting that "the problems in teaching children with language deficiencies may in some ways parallel the problems encountered by researchers who have attempted to teach subhuman species to use a human communication system" (p. 405).

A review of the literature on the use of manual signing with subjects labeled mentally retarded indicates that the majority of studies, both research and clinical, have used subjects labeled severely mentally retarded. Bricker conducted one of the first studies which attempted to teach signs to children labeled severely mentally handicapped in order to facilitate receptive language skills. It used a three-phase teaching procedure to determine whether imitative sign training facilitated word-object association. During the first phase the subjects were taught the ges-

tural movements or signs that represented the training objects by the modeling technique. In the subsequent phase, the instructor paired the sign with the appropriate word. Finally, the sign and word were paired with the appropriate object. The subjects were pre- and posttested using a ninety-item word-object discrimination test. The results indicated that this training procedure facilitated word-object association in the experimental group when their performance was compared to the control group who received no training.

Kopchich, Rombach and Smilovitz (1975) conducted a clinical study in which eleven residents from an institutional setting labeled severely mentally retarded were exposed to total communication 24-hours per day. The purpose of their project was "to provide an environment with constant stimulation of language and communication in both the visual and auditory form, and to provide a tool for increasing interpersonal communications in all aspects of daily living" (p. 22). The subjects had previously been taught to recognize and produce certain signs, however they were unaware of the communicative potential of the signs.

Both the experimental group and control group were pretested using the Fairview Language Evaluation Scale, an informant interview scale. The experimental group was then exposed to the total communication environment for a six-month period. Pre- and posttesting results

indicated that the experimental group increased their language level by an average of twenty months while the comparison group's language age remained about the same.

Various clinical reports have employed the use of total communication in both the classroom and individual therapy sessions (Brookner & Murphy, 1975; Linville, 1977; Richardson, 1975). Their findings suggest the use of total communication facilitates an increase in expressive and receptive sign vocabularies in children labeled severely mentally retarded.

A limited amount of literature exists that is specific to the use of total communication with individuals labeled trainable mentally retarded (Brookner & Murphy, 1978; Kohl, et al., 1975). One of these studies was conducted in a public school setting; the other was conducted in an institution. In the public school study, Kohl, et al. (1978) experimentally trained three subjects in sign production using a total communication approach. The subjects were presented with pictures of various food items while the teacher or therapist modeled the representational symbol for the item both verbally and manually. This procedure was used in a small group setting in the classroom and in individual speech therapy sessions for a two-month period. The results suggested that a small group setting facilitated faster learning of signs and that the signs trained in a particular setting were more often produced in that setting.

An important conclusion shared by many researchers is that total communication facilitates the understanding of spoken language and may help to stimulate oral language (Berger, 1972; Harris, 1978; Kahn, 1977; Larson, 1971; Stremel-Campbell, Cantrell & Halle, 1977). Some other advantages hypothesized by Stull (1972) include: (1) the speed of information is slowed down when using a total communication approach, (2) there is closer contact between the teacher and the child, (3) signs are picture-like and aide in concept formation, and (4) development of motor skill precedes the acquisition of spoken language. However, none of these studies were empirical in nature.

Poulton and Algozzine (1980) recently conducted a study to evaluate the use of total communication with individuals labeled mentally retarded and examined the extent to which practice in this area is guided by well-documented research. They concluded that the research does not (a) support the contention that individuals labeled mentally retarded acquire functional communication skills based on manual signing, or (b) that manual signing has become a primary mode of communication for these individuals. They also suggested that the use of a total communication approach with individuals labeled mentally retarded is guided by very little scientific research. Therefore, empirical evidence is needed to determine whether or not the use of total communication does facilitate expressive language: signed, spoken or simultaneous. The purpose

of this study was to determine whether the use of a total communication approach facilitates an increase in the frequency of expressive language behavior in children labeled trainable mentally handicapped. Stated in null form, the hypothesis was: There is no significant difference in the frequency of expressive language behavior when the total communication approach or an audio/vocal approach are used to facilitate language with individuals labeled trainable mentally retarded.

Method

Subjects

Three subjects were selected on the basis of chronological age and I.Q. to participate in the study. Permission to conduct the research was obtained from the parents prior to the beginning date (see Appendix for permission letters sent to the program director and parents, and consent form).

Subject 1. Nathan's chronological age at the time of the study was 8-years, 1-month. His intelligence quotient on the Stanford-Binet was 53. The audiologist's report indicated that Nathan's hearing acuity was within normal limits.

Subject 2. Jill's chronological age at the time of the study was 7-years, 0-months. Her intelligence quotient on the Stanford-Binet was 40. The audiologist's report indicated that Jill's hearing acuity was within normal limits. Although Jill has a history of middle ear problems, the speech pathologist monitored her hearing throughout the duration of the study and reported that her hearing remained within normal limits.

Subject 3. Tracy's chronological age at the time of the study was 7-years, 0-months. Her intelligence quotient on the Stanford-Binet was 44. The audiologist's report indicated that Tracy's hearing acuity was within normal limits.

Setting

All three subjects attended a self-contained school located in a rural area of Illinois. This facility is part of the public school system and serves the educational needs of children labeled trainable mentally retarded. The majority of the students who attend this school reside in the surrounding eight county area and are bussed to the school daily.

The subjects along with six other students were enrolled in a self-contained, primary level classroom where both the teacher and the teacher's aide used a total communication approach during daily routine activities. The system of manual communication employed in the classroom was Signing Exact English (Gustason, Pfetzing, & Zawalkow, 1975).

The study was conducted in a 8m x 5m conference room at the school. This room was isolated from the other classrooms in the building. Each subject was brought to and from the room by the investigator. During the individual sessions, the subject was seated at a table next to the investigator.

Procedure

The baseline phase consisted of two sessions per day, one in the morning and one in the afternoon, for a total of ten sessions for each subject. During each session the subject was presented with an activity which was randomly selected from a sample of activities (see Table 1). These materials were chosen because they are commonly used in activities in the classroom setting and are familiar to the experiences of young children.

Insert Table 1 about here

Fifteen stimuli relevant to the activity were then presently using the oral method, e.g., push train. These stimuli were drawn from a pool of utterances which occur most frequently in normal children during the developmental period of 24-36 months (Bloom & Lahey, 1978). Table 2 lists examples of these stimuli along with their semantic relations.

Insert Table 2 about here

The subject was reinforced for verbal, signed, and/or verbal/signed responses that were task or non-task specific. These responses were reinforced so that all expressive language behavior was included. The only responses that were not reinforced were play sounds such as "choo-choo"

Table 1

Activities

1. Soap bubbles
2. Coloring book and crayons
3. Clay
4. Puzzles: Rabbit, Dog, Cat, Tools.
5. Pictures of children in daily routine
6. Tea set
7. Play food/Shopping bag
8. Sand with cups and spoons
9. Telephones
10. Train with tracks
11. Farm animals and barn
12. Three balls (small, medium, large)
13. Doll (with a spoon, cup, plate, comb, blanket, bed)
14. Dollhouse with furniture
15. Tub with water-boat and cups
16. Mr. Potatohead game
17. Mirror and comb
18. Truck with blocks
19. Puppet: Cookie Monster
20. Book: Pets
21. Purse with a wallet, comb, keys and kleenex
22. Cars with garage

Table 2

Semantic Relations Expressed by Stimuli

Action-object	push train
State-object	want cookie
Agent-action	you hold
Action-location	go home
Object-location	Mom home
Recurrence	more puzzles
Negation (non-existence)	no peanut butter
Possession	Tracy's hat
Demonstrative (existence)	there telephone
Feature marker (attribute)	red clay
Recipient of action	give cookies

(Stremel-Campbell, et al., 1977)

and "moo-moo". The subject was reinforced on a FR:1 schedule using social praise (e.g., "You are a good worker."). The menu of reinforcers were randomly arranged prior to each session (Table 3 lists the social reinforcers that were used).

Insert Table 3 about here

The treatment phase consisted of five sessions of oral and five sessions of total communication. These sessions were distributed randomly throughout the treatment phase. The conditions and the presentation of activities remained consistent with those in the baseline phase. During the oral sessions, the stimuli were presented verbally while during the total communication sessions, the stimuli were presented both verbally and manually. The manual communication system employed was Signing Exact English (Gustason, Pfetzing & Zawolkow, 1975). The reinforcement schedule differed slightly however. During the first five sessions of the treatment phase, the subjects were reinforced on a FR:1 schedule using social praise; the next five sessions were conducted using a FR:2 schedule.

Recording method

Each session was videotaped and then reviewed by the investigator at a later time. All expressive language behaviors were recorded via frequency recording (see Form A).

Table 3

Social Reinforcement

I like the way you are working with me.

You are a good worker.

You are trying hard, good.

Good boy/girl.

I am happy you are here.

I am having fun with you.

Good for you.

Good job, "(name)".

I like playing with you.

Insert Form A about here

Each response was categorized according to the following criteria: task specific, non-task specific and no response. Task specific referred to responses which were related to the stimuli or activity and elicited by the investigator. Non-task specific referred to responses which were unrelated to the stimuli or activity and were elicited by something other than the investigator. No response indicated that there was no evidence of expressive language behavior following stimuli presented by the investigator.

Within each category, the response was defined as being either simple or complex. Simple responses consisted of single words, noun/verb phrases or expanded noun phrases. Complex responses contained two or more noun-verb relations.

In addition, the mode of response was recorded as verbal, signed or verbal/signed. The data was collected on consecutive days, when school was in session, over a four-week period.

Experimental Design. A multi-element baseline procedure was used for this study (Sidman, 1960). Two methods were employed: During the baseline phase, the stimuli were presented orally; during the treatment phase, the

Form A

Data Sheet

Subject:_____ Date and Time:_____

Session:_____ Condition:_____

	Task Specific						Non-task Specific						No
	Simple			Complex			Simple			Complex			
Stimuli	V	S	VS	V	S	VS	V	S	VS	V	S	VS	
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													

v=verbal
s=signed
vs=verbal and signed

stimuli were presented in total communication for 50% of the sessions while the oral method was employed for the other half of the sessions. The oral and total communication methods were randomly assigned to the sessions.

This design was appropriate because it provides "experimental control over sources of variability that are normally difficult to manage" (Sidman, 1960, p. 325). Furthermore, the multi-element baseline provides for replication over three subjects, and "frequent and repeated time samples of each element" (Sidman, 1960, p. 325).

Results

For analysis purposes all task-specific responses, both simple and complex were combined. In actuality only five responses were coded complex while the remainder were simple responses. The frequency of task-specific responses for each subject are shown in Figures 1, 2, and 3. The frequencies in the baseline and treatment sessions were then compared using Mann-Whitney U-tests (Siegel, 1956). The comparisons indicated that there was no significant difference for any of the subjects (Subject 1, $U=37.5$, $p>.05$; Subject 2, $U= 45.5$, $p>.05$; Subject 3, $U=55.5$, $p>.05$).

Insert Figures 1, 2, and 3 about here

Interrater reliability was established on a random selection of 25% of the total sessions. A graduate student who was trained in observing language behavior viewed the videotapes and recorded the frequency of responses according to the criteria outlined on the data sheet.

Figure Caption

Figure 1. Frequency of task-specific responses for Subject 1.

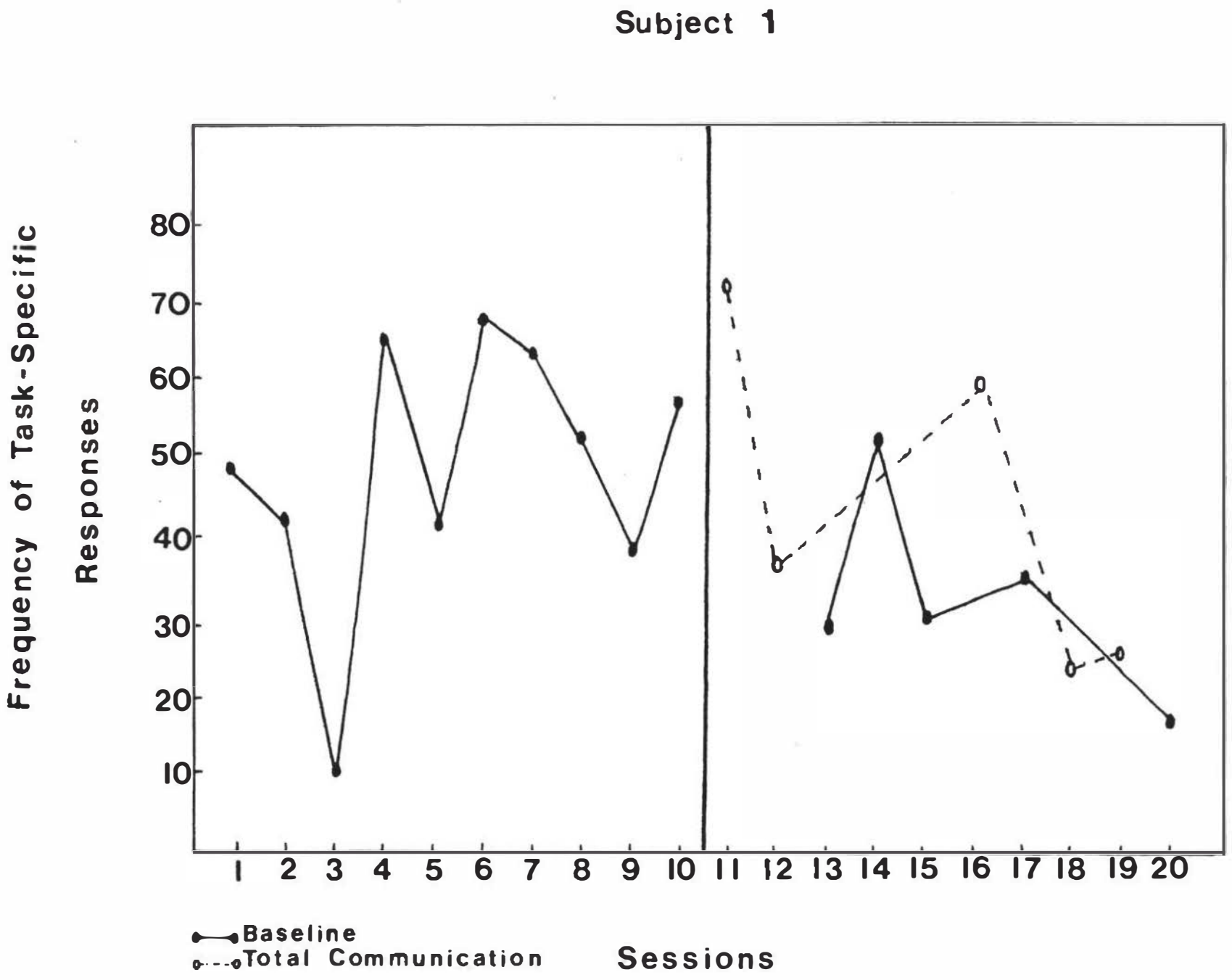

Subject 1
Frequency of Task-Specific Responses
80
70
60
50
40
30
20
10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Baseline
Total Communication
Sessions

Figure Caption

Figure 2. Frequency of task-specific responses for Subject 2.

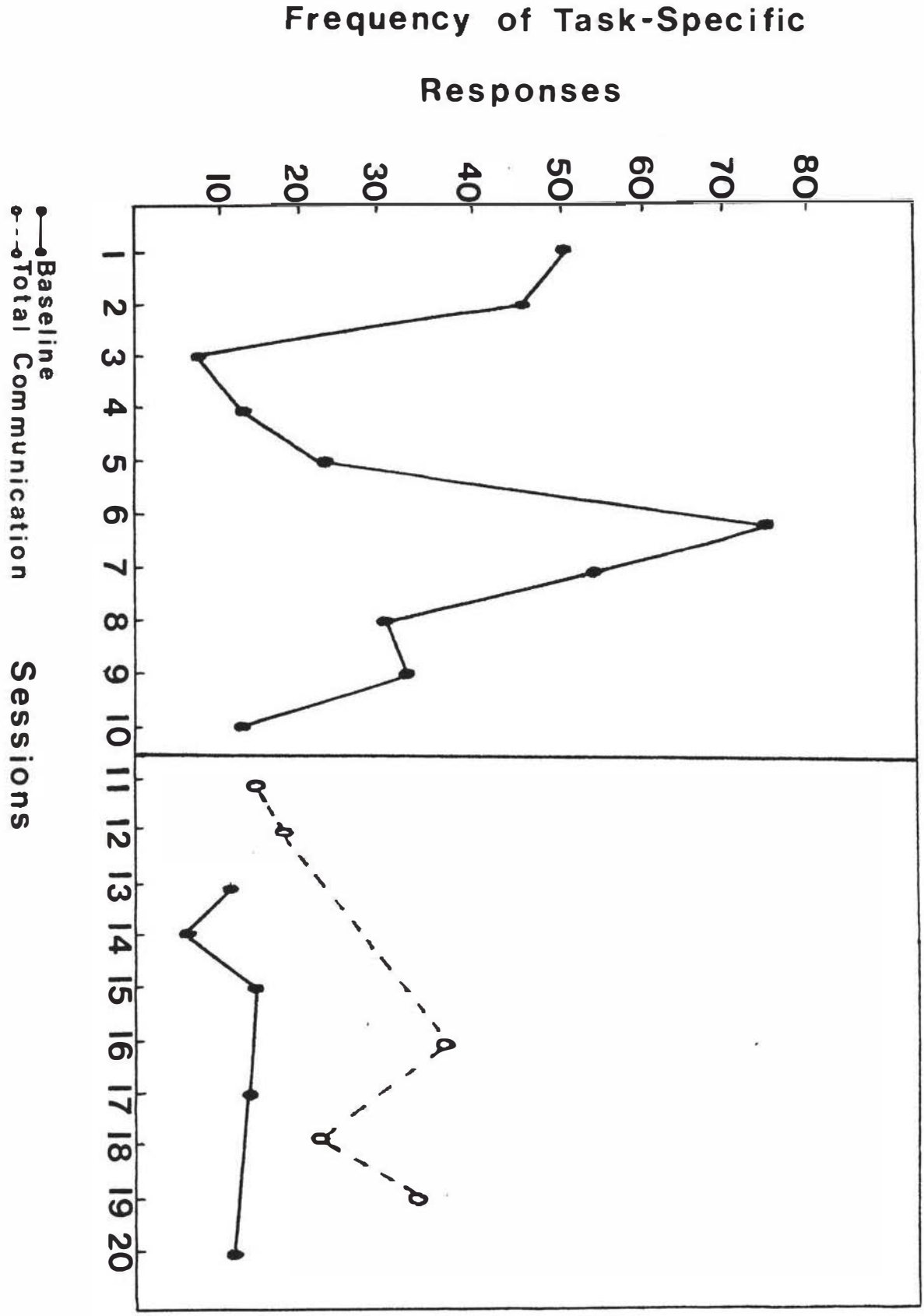
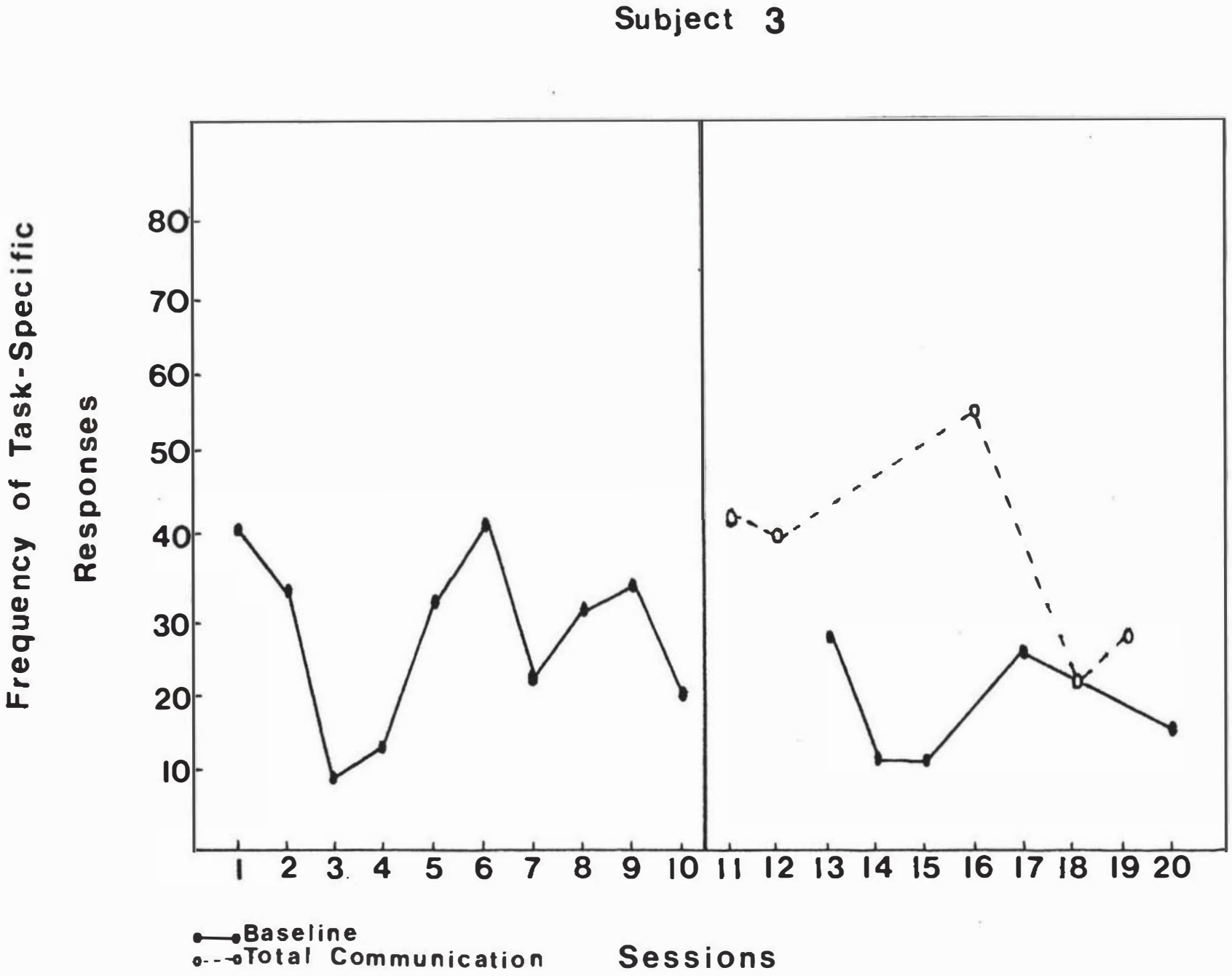

Frequency of Task-Specific Responses
10
20
30
40
50
60
70
80
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Sessions
Baseline
Total Communication
Subject 2

Figure Caption

Figure 3. Frequency of task-specific responses for Subject 3.


Subject 3
Frequency of Task-Specific Responses
80
70
60
50
40
30
20
10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Baseline
Total Communication
Sessions

The number of agreements divided by the number of agreements and disagreements times 100 yielded a reliability of 79.13% for the total communication sessions and 80.4% for the oral sessions.

Discussion

Since the practice of total communication has become popular in recent years, special educators need to become aware of the efficacy of this approach. Teachers and speech and language pathologists must consider the individual needs, abilities and capabilities of the child before initiating any language training program, either verbal or manual.

The present data suggested that the total communication approach did not elicit more expressive language behavior than the oral approach. This conclusion, based on the statistical analyses, would indicate that the total communication approach was no more efficient than the oral approach for these three subjects in a controlled setting.

A visual analysis of Figure 2 may appear to show that total communication was more effective for this subject. However, her highly variable baseline negated these apparently significant differences. This could indicate that the subject preferred total communication. Indeed, she was the only subject for whom manual communication was part of her individual educational plan. Although

the other two subjects are exposed to total communication on a daily basis at school, they do not receive individual language training which uses this approach. Additional research in this area might investigate the effect that modality preference has on the efficacy of a total communication approach. Some children may not respond to this approach because they prefer the verbal modality. Consequently, this preference would need to be taken into account prior to initiating a language training program.

Characteristically, children labeled mentally retarded are deficient in attention which directly affects discrimination learning (Zeaman & House, 1963). Skinner (1953) suggested that generalization occurs when similar stimuli are presented and reinforced in a variety of settings. However, since children labeled mentally retarded are deficient in the ability to discriminate among stimuli, they are unable to generalize concepts to a variety of settings (Zeaman & House, 1963). In relation to the present study, the subjects may not have been able to generalize their experiences from the classroom to the experimental setting. This may account for the fact that their responses to total communication were not significantly different. This effect would suggest that expressive language behavior should be trained in a variety of settings such as the classroom, speech therapy session, and the child's home in order to facilitate generalization.

The data suggest that the frequency of responding was situation specific. For example, the presentation of the photographs during session 16 elicited an increase in the number of responses across all three subjects (see Figures 1, 2 and 3). The subjects seemed to demonstrate an increased frequency of responding when the session activities were those for which the subject indicated a preference or activities with which the subject had previous experience. Future research should investigate the possibility that preference for or experience with a given activity may increase the frequency of expressive language behavior.

Several factors may have influenced the results of this study. The artificiality of the setting may have affected a change in the frequency of responding. The Hawthorne effect supports the notion that the knowledge that an experiment is being done is enough to cause the subjects to change (Ary, Jacobs & Razavieh, 1972). Kohl, et al. (1978) suggested that expressive language behavior appears to occur in the environment in which it was trained. Perhaps the subjects would have responded differently in a more familiar setting, such as their classroom. The familiarity with the person who is communicating may also make a difference.

Another factor which may have influenced the results was the duration of the study. Two sessions were conducted daily for four consecutive school weeks. The

intensity of two sessions per day may have caused the subjects to become satiated. As compared with the base-line results, each subject exhibited a decrease in their frequency of response during the later sessions of the treatment phase (see Figures 1, 2 and 3).

A final consideration that may have affected the results was the systematic presentation of the stimuli and reinforcers. Although these factors need to be controlled, they did not allow for spontaneous interaction between the researcher and subject. In addition, the predetermined reinforcers may not have been as effective as would a natural response to the child. The stimuli may have been beyond the scope of the child's level of language development. Researchers conducting future studies in this area would be advised to assess the subjects' language abilities, both receptive and expressive, prior to treatment.

Stremel-Campbell, et al. (1977) pointed out that each child comes with different motor, conceptual, and social skills, all of which play an important part in determining whether or not the child will succeed. Therefore, some characteristics may be good indicators of the successfulness of a total communication approach. Further research should investigate the possibility that a wide discrepancy between language level and chronological age has an influence on the efficacy of the total communication approach. In addition, researchers should consider the

age level at which the language training program is initiated.

This study should provide impetus for future examination of the effects of the two methods, oral and total communication, when they are presented in a more natural setting such as the classroom. The subjects could be randomly assigned to two classrooms in which one teacher would employ a total communication approach while the other would use an oral approach. This type of study would hopefully eliminate the Hawthorne effect and provide a natural environment for expressive language behavior to occur.

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Appendix

Letters of permission sent to

Program Director and Parents, and Consent Form

EASTERN ILLINOIS UNIVERSITY
CHARLESTON, ILLINOIS 61920

February 22, 1982

Department of Special Education 217-581-5316

Mr. Don Landis, Program Director
Armstrong Center
1400 Piatt
Mattoon, Illinois 61938

Dear Mr. Landis,

This letter requests your permission to conduct research for my graduate thesis at the Armstrong Center. The purpose of my study is to determine whether or not there is a significant difference in the frequency of expressive language behavior when the Total Communication (manual signing and oral communication combined) or an oral approach are used to facilitate language learning with those individuals labeled trainable mentally handicapped. This study has been approved by the Department of Special Education at Eastern Illinois University.

If you approve this study, consent forms (see attached sample) will be sent home to the parents of those students in Mrs. Pearcy's and Mrs. Green's homerooms. Upon parental consent, three subjects will be chosen according to relevant language development information obtained from the school speech clinician. Each subject will then receive individual instruction in expressive language development using both oral and Total Communication methods in sessions of 10-15 minutes for 4-6 weeks. During each session, activities involving common objects will be presented. Words and/or sentences will be presented by the investigator in spoken fashion or spoken and manually together. The children will not be asked or required to use manual signs themselves. Each session will be videotaped and used only for the purpose of this study.

I would like to begin the study on March 8, 1982, upon your approval. Questions concerning this research can be answered by calling Lenore Aebischer at 348-8975, or at the Department of Special Education at 581-5316, or by Dr. Andrew Brulle at 581-5316.

Results of the study will be available in May 1982, upon request.

Thank you for your cooperation. I look forward to hearing from you in the near future.

Sincerely yours,
Lenore Aebischer
Lenore Aebischer

Enc.: Parent consent form with cover letter.

EASTERN ILLINOIS UNIVERSITY
CHARLESTON, ILLINOIS 61920

Department of Special Education 217-581-5316

Dear Parent/Guardian,

This letter requests your permission for your child's involvement in a study of language training approaches with young children labeled trainable mentally handicapped. The study has been approved by Eastern Illinois University and the Mattoon School District. Through this study , information on the effects of the use of Total Communication (manual signing and oral communication combined) as a teaching method will be gathered.

If your child is chosen to participate in this study, he/she will receive individual instruction in expressive language development using both oral and Total Communication methods in sessions of 10-15 minutes for 4-6 weeks. During each session, activities involving common objects will be presented. Most of the activities will involve toys which are frequently used by the children. Words and/or sentences will be presented by the investigator in spoken fashion or spoken and manually together. The children will not be asked or required to use manual signs themselves. All the responses of individual children are confidential and will not be used for any purpose other than this study. Each session will be vidotaped and used only for the purposes of this study.

If you sign the consent form, you are agreeing to:

1. Permit Lenore Aebischer to obtain relevant language development information about your child from the school speech clinician.

2. Permit your child to participate in this study.

3. Permit your child to be videotaped.

You are free to terminate your child's participation in the study at any time without penalty or prejudice, even if you sign a consent form.

Questions regarding this study will be answered by calling Lenore Aebischer at 348-8975, or at the Department of Special Education 581-5316.

A summary of the results of this study will be available in May of 1982, upon request.

Prompt return of this consent form to your child's teacher will be greatly appreciated.

Thank you.

Sincerely,

Lenore Aebischer

EASTERN ILLINOIS UNIVERSITY
CHARLESTON, ILLINOIS 61920

Department of Special Education 217-581-5316

CONSENT FORM

I agree to allow my child _____ to participate in the study being conducted by Lenore Aebischer, a graduate student in the Department of Special Education at Eastern Illinois University, (under the supervision of Dr. Andrew Brulle).

I have been informed of the procedures to be followed. I understand that in signing this consent form, I am agreeing to:

1. Permit Lenore Aebischer to obtain relevant language development information on the child from the school speech clinician.
2. Permit my child to participate in the study.
3. Permit my child to be videotaped.

I also understand that I am free to terminate my child's participation at any time, without penalty or prejudice.

_____ I do agree to allow my child to participate in this study.

_____ I do not agree to allow my child to participate in this study.

_____
(parent/guardian signature)