The Effects of a Short Term Preacademic Total Approach Program on the Language Development of Disadvantaged Children

Doug Richter
Western Kentucky University

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THE EFFECTS OF A SHORT TERM PREACADEMIC TOTAL APPROACH PROGRAM ON THE LANGUAGE DEVELOPMENT OF DISADVANTAGED CHILDREN

A Thesis
Presented To
The Faculty of the Department of Speech
Western Kentucky University
Bowling Green, Kentucky

in Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Doug Richter
August, 1974
THE EFFECTS OF A SHORT TERM PREACADEMIC TOTAL APPROACH PROGRAM ON THE LANGUAGE DEVELOPMENT OF DISADVANTAGED CHILDREN

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Dean of the Graduate College
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Special thanks is expressed to Dr. O'Connor for his guidance and reinforcement throughout this experiment.

Sincerest appreciation and respect is expressed to Robert Wurster and Randall Capps for their concerned efforts throughout this program.

A project of this nature could not be successful without the faithful support and patience of those persons close to the writer. Special appreciation is expressed to Mr. and Mrs. Richter, Janice Montgomery, Cyndi Beal and Jethro Tull.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>iii</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>iv</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>v</td>
</tr>
<tr>
<td>RATIONALE FOR THE STUDY</td>
<td>1</td>
</tr>
<tr>
<td>PROCEDURE FOR THE PRESENT STUDY</td>
<td>13</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>13</td>
</tr>
<tr>
<td>Procedure</td>
<td>14</td>
</tr>
<tr>
<td>RESULTS</td>
<td>17</td>
</tr>
<tr>
<td>CONCLUSIONS, DISCUSSION AND IMPLICATIONS FOR FUTURE RESEARCH</td>
<td>21</td>
</tr>
<tr>
<td>APPENDIX</td>
<td>24</td>
</tr>
<tr>
<td>FOOTNOTES</td>
<td>27</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>31</td>
</tr>
</tbody>
</table>
THE EFFECTS OF A SHORT TERM PREACADEMIC TOTAL APPROACH PROGRAM ON THE LANGUAGE DEVELOPMENT OF DISADVANTAGED CHILDREN

Doug Richter August 1974 34 pages

Directed by: J. Regis O'Connor, Randall Capps, and Richard Murrell

Department of Speech Western Kentucky University

This research tests a short term total academic language development program on the development of language delayed children. It was hypothesized that an increase in vocabulary and response length after a six week treatment program would be reflected on the Peabody Picture Vocabulary Test and the Mean Length of Response Test. The treatment program utilized both the group and tutorial approach emphasizing the basic skills associated with listening, language, reading, writing and arithmetic. The subjects were nine-preschool Head Start children participating in a summer program at Western Kentucky University. A comparison of the performance on pre and post test revealed no significant difference.
RATIONALE FOR THE STUDY

The ancient Roman concept of "E pluribus unum" invol-
untarily reflects a uniting of various ideals and actions
in the contemporary American educational structure. Under
the effect of uniting many children differing in race,
socio-economic background and intellectual abilities under
the same educational design and unilaterally exposing them
to the same structured disciplines, the individual child
should become mentally and socially competent for the pro-
pagation of this society. Combine this with the contempo-
rary belief in fields related to psychology that the quality
of various experiences early in life may crucially affect
intellectual development and the creation of an early age
intervention program becomes inevitable. This study will
combine the educational concept of incorporating many dis-
ciplines into one total academic program with the behavioral
beliefs of early intervention.

Early preacademic intervention for the socially dis-
advantaged child did not gain mentionable recognition until
the mid 1960's when the Federal government increased its
involvement by appropriating more than $90,000,000 to im-
plement summer programs for more than 500,000 four and
five-year-old children. Such programs, generally under
1
the title of Head Start, were initiated as a result of the continuing failure of socially disadvantaged children to demonstrate the basic skills associated with language and reading. Various surveys of large school populations indicated the prevalence of children with reading difficulty to be between ten and thirty percent of the total school population and the rate of reading difficulty for lower socio-economic children to have ranged from four to ten times higher than the normal school population. Further complications arise as a result of the inhibiting factor of speech associated with the culturally disadvantaged child engaging in public communication. Research by McConnell and Horton emphasized the relationship between the child and the technique by which he chose to solve a problem. The middle or upper socio-economic class child generally attempted to solve a problem verbally while the lower socio-economic level child is more inclined to physically attack a similar problem. The lower language performance has been attributed to the language deficiency of the child. If the communication skills necessary for the primary school grades have not been a part of the socially disadvantaged child's environment, then behavioral difficulties or low academic achievement may generally follow. Various pre-academic programs for the disadvantaged child have been successfully developed to decrease the chances of early academic failure. The rationalization and analysis of various programs will be initially considered so that the
origin of and a comparison with the present total approach program may be presented.

It should be noted that on occasions negative views have been expressed as to the effectiveness of preschool programs aimed at otherwise potentially poor achievers in the public school system. Kohlberg has argued "that specific types of preschool academic and linguistic training, even if immediately successful, are unlikely to have long-run, general beneficial effects and that programs directed toward raising general psychometric intelligence are unlikely to have marked success." He does, however, differentiate between types of programs and attributes mild success to those programs utilizing intellectual conflict and the sequential ordering of experiences. A more positive position concerning the probability that preschool programs will increase the acquisition of language and basic learning skills has been asserted by a great number of researchers. Evans and Bangs in 1963 at the Houston Speech and Hearing Center studied the effects of a three-year preacademic program. Their project introduced into a school district an already developed program aimed at the assessment and training of children between the ages of three and six who were predicted to have later academic difficulties. In 1969, three years after the treatment had been terminated, they found that seventy percent of the subjects who completed their program were achieving a grade level. Additional results indicated that only twenty-five percent of
the subjects who had initially enrolled and later withdrew were at the end of three years achieving at grade level and that only eighteen percent of those who did not receive treatment were achieving at grade level. The program stressed the academic skills associated with oral and written language as generally found in the first grade curriculum. The results of this study refute the intellectual achievement dissipation factor which would directly influence later academic achievement if the treatment program did not have lasting effects. Gray and Klaus are additional researchers who reported a significant difference in I.Q. scores on the Stanford-Binet after a relatively short treatment program had ceased for a three-year period. The various effects of program structures have been investigated by Weikart as he compared the short-term results of three programs. A comparison between the traditional nursery school, a structured nursery school and a task-oriented nursery school yielded results of significant achievement for the task-oriented situation. The traditional nursery school method generally consists of observing and waiting for the needs of the children to develop and then timing various activities for these needs. The basic goals centered around emotional, social and motor developments. The task-oriented program centered around specific pre-planned goals such as logical thinking, reading and arithmetic. The Stanford-Binet Test indicated that the only group to show significant gains was the task-oriented group. Weikart illustrated
the need to move away from the nursery-school type program into a preacademic program emphasizing the basic learning skills found in the public school system.\(^8\) McConnell and Horton summarized by stating that the

Language and sensory-perceptual training programs implemented in the critical preschool years may indeed be expected to combat in an effective way the sociologically induced mental retardation of culturally disadvantaged children. Both the receptive and expressive aspects of language functioning need to be stimulated, increased and improved for them.\(^9\)

They continued with emphasizing the small group interaction common to preacademic programs necessary for the correct syntactic construction of language not found in the nursery school.

Another method of assessing the need for preschool programs can be demonstrated by comparing the language level of socially disadvantaged children to the norm level within a particular age group. Gerber and Hertel reported on the extent to which language level varied from the socially disadvantaged to the norm. They found by use of the Illinois Test of Psycholinguistic Ability (ITPA) that the total test for the disadvantaged child indicated a thirteen and one-half month deficit in language performance. Various subjects demonstrated a deficit range from nine to twenty-five months. The subtests indicated that the disadvantaged children "were less able to handle the syntactical and inflectional aspects of language without conscious efforts, and were less able to correctly reproduce a sequence of
symbols." The ages of the children ranged from four years to five years seven months.

The structure, length of treatment and techniques of additional experiments will be briefly investigated so that a comparison of differences between this experiment and others may be made. Bereiter and Engelmann designed and tested a program to be used with language disadvantaged pre-school age children. They tested fifteen disadvantaged children with a median age of four years, six months, and found that on the Auditory Vocal Automatic, the Auditory Vocal Association and the Vocal Encoding of the ITPA the children were achieving at a three-year level. After seven months of their treatment program, the children scored at the normal level on the Verbal Subtest and six months above it on the Vocal Encoding. Eleven of the fifteen children scored at or above the first grade level at the end of nine months when the Wide Range Achievement Test was administered. Bereiter and Engelmann found the deficit for these young children to be the same as the learning disability disadvantaged children between the ages seven and fourteen. Their program consisted of intensive diagnosis and treatment in the areas of language, arithmetic and reading. A task was presented in four levels of difficulty beginning with the basic ability of identification by pointing and transcending through the verbal spontaneous identification of an object or concept. Grouping was done on the basis
of language ability with five children per group with each group lasting a period of twenty minutes. They felt that the homogeneous groups would minimize boredom and would not delay the faster children.

A highly structured experiment conducted at the University of Illinois concerning disadvantaged three-year-olds revealed significant results. These results indicated that forty percent of the fifteen experimental subjects achieved gains of twenty months or more in language age while seventy-three percent demonstrated a seven percent achievement gain for twenty months and a twenty-one percent gain for fifteen months. The experimental group received intensive instruction in areas of math, language, reading readiness and science-social studies. This total approach program was presented in the form of games, card packs, multisensory material and models. A low pupil-teacher ratio of five to one was utilized so that each child would experience a high success rate. The children were bussed to school for a period of two hours and fifteen minutes with the program divided into three segments of twenty-five minutes each. Children remained with the same instructor for each period but were allowed to form their own groups during music and play sessions. Both sessions were designed to reinforce the curriculum of the group teacher. This highly structured total approach group program lasted for a period of seven months and utilized concepts that are
becoming increasingly popular. A similar experiment by Kaines, Teska and Hodgins concerning structured and non-structured programs utilized the ITPA and the Peabody Picture Vocabulary Test (PPVT) to emphasize the greater gains of the structured program. This program stressed the importance of coordinating cognitive development and verbal expressions with a structured learning situation. Edwards and Stem also support the gains in intellectual achievement found in the structured program, but they carried the emphasis a bit further to stress the importance of a systematic presentation of the curriculum with specific objectives.

Found at the remedial level are re-education programs that utilize the total academic approach for children who attempted public school and failed because of behavioral differences or the inability to perform academically with the norm. Such programs begin working with children at the age of six and incorporate both the group and individualized approach. Under a highly structured system the child is promoted within a particular modality such as reading, speaking or writing by the progressive approximation of one of these particular tasks. Such programs have proven highly successful both in the areas of academic achievement and approved social behavior.

The total approach and group programs have obviously not gone without intelligent rebuttal. Opposition generally argues that specific deficits of a child may be overlooked in a group setting or that certain disadvantaged children
cannot be adequately identified within a group. Blank and
Solomon state that

...active involvement refers, not to motoractivity,
but rather to the internal mental manipulation of
experience. The latter applies to skills involv-
ing the ability to organize thoughts, to reflect
upon situations, to comprehend the meaning of events,
and to structure behavior so as to be able to choose
among alternatives.16

These needs, they feel, can only be met through individual
one-to-one tutoring in brief fifteen to twenty-minute ses-
sions. This tutoring stresses one particular deficit mo-
dality rather than working in all or several areas. Credit
is given to the group situation in dealing with concrete
concepts, but in the area of abstract thinking they strongly
reinforced the one-to-one ratio. An elaboration of this
study is seen in an additional study by Blank, Koltov and
Wood. They again stressed the tutorial approach but now
compared that approach with the importance of structure.
In fifteen-minute sessions the tutors utilized materials
common to the regular nursery school; such as food, cars,
books, blocks and dolls. These materials were presented in
various learning situations designed to capture the child's
interest. Their findings demonstrated the greater gains
of a structured tutorial program over the more traditional
or experience-type preschool program. The structured pro-
gram identified the child's weaknesses and centered treat-
ment around improvement.17

Issues other than the need for preschool programs,
structure and group or tutorial approach have included
the use of persons other than professionally trained therapists and the controversial issue of language development. Various preschool programs have also emphasized the use and effect of such variables as the higher rate of impulsivity of the disadvantaged child. The attention span in relation to impulsive response of a disadvantaged child has indicated that the disadvantaged child is more likely to make an error due to the lack of forethought before answering.18 Other researchers have also emphasized this difference along with the cognition style difference of the disadvantaged child.19 Another variable introduced into various programs has been that of paraprofessional personnel. The use of parents, volunteers, community aid personnel and preprofessional students has often contributed to the success of programs. The results of Blank, Koltov and Woods' study indicated that tutors can be trained to effectively carry out demanding techniques.20

A final consideration of numerous studies has been the controversial issue of the development of language by the disadvantaged child. Some researchers feel that the development of the language delayed child is the same syntactically as the normal child but proceeding at a slower rate.21 Others feel that the language development of the socially disadvantaged child is never syntactically the same as the normal child. Generally, researchers who believe a difference in development to exist have followed an early study by Paula Menyuk. She found "that at no age level did the grammatical
production of a child with deviant speech match or closely match the grammatical production of a child with normal speech from two years on." 22 She further attributed the difference to the coding process of perception and production of the language used. The syntactic structure of the children with deviant speech followed more general rules; whereas, normal speaking children used increasingly differentiated rules. Lee also found through comparing normal and deviant syntactic development that the language delayed child was not only slower in normal development but was failing to produce certain types of syntactic structures. 23 Bloom questioned Lee concerning materials used and the reliability of the original Menyuk tapes. Bloom followed the belief that language development is similar for both the disadvantaged and the normal child. 24 Raph also found that the "disadvantaged children's pronunciation and articulation, vocabulary, sentence length and use of grammatical and syntactic structures resemble the language of privileged children of a younger level." 25, 26

Even though this experiment is not testing any one of the particular variables mentioned, the significance of each is great in that the total approach program is the synthesis of previous research. The "E pluribus unum" approach of this experiment will incorporate under a highly structured sequential event a treatment program which uses students as tutors to implement a one-to-one tutorial approach and a small-group encounter experience for each
child. Thus, this program will utilize the controversial issue of tutorial and group approach to its advantage in that every child will consistently encounter both. The structured nature in which specified sequential information will be administered to each child will maximize the possibility of intellectual achievement within this program. A total approach stressing five particular modalities will make available the academic exposure necessary for success in the first grade. The use of preprofessional students administering this treatment will help familiarize the subjects with a structured academic environment which will inevitably be met in the near future.
PROCEDURE FOR THE PRESENT STUDY

Hypotheses

The questions to be answered by this study are concerned with the change in response length and vocabulary of the socially disadvantaged child after a relatively short total academic communication skills development program has been administered. The hypotheses to be tested are: (1) The Communication Skills Development Series will not produce a significant change in the child's Peabody Picture Vocabulary Test score; (2) The Communication Skills Development Series will not produce a significant change in the child's Mean Length of Response Test score.

The Peabody Picture Vocabulary Test developed in the early 1960's has been used extensively in psychology and speech therapy. A brief review of both the validity and reliability of the test may be obtained from the test booklet and almost any overview concerning vocabulary and intelligence tests. The Mean Length of Response as a testing tool has been controversial. It consists of spontaneously eliciting a desired number of responses from a child and then transcribing these responses on paper to be analyzed. Analysis is done according to prescribed methods of eliminating and accepting specific utterances. Shriner reports that
the MLR has probably been one of the most used measures in studying the level of children's language since it was developed in 1925. He defines MLR "as the number of words per response averaged over a sample of 50 responses."²⁷ Shriner and Sherman reported in another study that "if a single measure is to be used for assessment of language development, this one (MLR) thus would appear to be the most useful among those studies."²⁸ Although most researchers feel that 50 utterances are sufficient for an adequate representation of spontaneous speech some have raised mild objections. Tyack states "that for normal children at all levels and for language handicapped children at low levels, the first 50 sentences were typical of the larger corpus. For linguistically deviant children with a mean sentence length of more than 3.0, however, 100 sentences proved a more reliable measure of typical sentences from the larger corpus.²⁹, ³⁰

Procedure

The subjects in this experiment were enrolled in the Bowling Green Public Schools' Head Start program during the summer of 1974. There were four females and five males out of which six were black and three white. The age range was from four years one month to six years five months. The requirement for entrance into this program was the previous enrollment in the Head Start program.

In the first week of the six-week period the children were given a pure tone threshold hearing test to determine
if any hearing losses were present. This was administered as a standard precautionary measure and was of no statistical significance to the experiment. The MLR was obtained by tape recording an estimate of 50 or more responses spontaneously elicited through conversation or stimuli material. Stimuli material consisted of several large fold-out posters obtained from level P of the Peabody Language Development Kit. Also within the first week the PPVT was administered twice to determine a mean score for each.

The treatment program was divided into two sessions daily for each child. One session consisted of a one-to-one tutorial program which lasted 25 minutes, while the other session consisted of a small group encounter experience also lasting 25 minutes. The program utilized two different groups with the child alternating among groups from day to day over a four-day period. Thus, each child experienced the same tutor daily and the same group every other day. Both the tutors and group leaders were students enrolled in a Language Disorders course at Western Kentucky University.

Each child while in the individual session received treatment in five areas. (See Appendix) Each particular area or modality was structured according to the developmental level of difficulty with the child remaining within a particular task level until 90 percent proficiency had been reached. All modalities were equally treated to insure that the child would be likely to experience success at some level in at least one modality. Thus, it is probable that a
child might experience daily treatment in several modalities but succeed at a different level in each.

Each group reinforced two of the five modalities mentioned. Treatment for Group I consisted of basic listening and speaking skills while Group II stressed the necessary skills for reading and writing. Listening skills consisted of such tasks as auditory discrimination of various sounds, auditory recognition of various environmental sounds and auditory retention. The speaking tasks of Group I consisted of building basic sentence structures starting at the work level. Progression from here went to various levels of building simple sentences. Group II utilized basic writing skills such as holding the pencil correctly, tracing and making specified lines and curves associated with writing. The reading portion of Group II stressed letter recognition, word picture association and name recognition.

The total treatment, encompassing both tutorial and group approach and using the five modalities, lasted for a period of six weeks. The final week was used for the post test administration of the MLR and PPVT twice each.
RESULTS

Initial statistical analysis of data using the Mann-Whitney U test compared the pre to post test scores of the Peabody Picture Vocabulary Test and the pre to post test scores of the Mean Length of Response test. These comparisons failed to demonstrate results significant enough to reject either hypothesis.

Scores from the Peabody Picture Vocabulary Test showed a general increase in all scores from pre to post test with increases ranging from .5 to 7.5. The greatest overall increase on the Peabody Picture Vocabulary Test occurred in the scores of the four subjects who initially scored lowest. (See Table I)

Raw scores on the Mean Length of response test showed a random increase and decrease from pre to post testing. Generally subjects who initially scored high in response length decreased while subjects who initially scored lower increased. (See Table II)

Additional analysis of data comparing Peabody Picture Vocabulary Test scores revealed a greater gain for females than males. According to the Mann-Whitney U test, however, this difference was not statistically significant. (See Table III)
Table I

Comparison of pre to post test scores on the Peabody Picture Vocabulary Test.

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Rx</th>
<th>Ry</th>
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<tbody>
<tr>
<td>54.5</td>
<td>55.0</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>51.0</td>
<td>54.0</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>48.0</td>
<td>49.5</td>
<td>12.5</td>
<td>14</td>
</tr>
<tr>
<td>45.5</td>
<td>48.0</td>
<td>11</td>
<td>12.5</td>
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<td>40.0</td>
<td>43.0</td>
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<td>10</td>
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<td>36.0</td>
<td>41.0</td>
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<td>9</td>
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<td>40.0</td>
<td>5</td>
<td>7.5</td>
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<td>4</td>
</tr>
<tr>
<td>18.0</td>
<td>20.5</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

X = pre test raw scores
Y = post test raw scores
Rx,Ry = individual rank of each raw score

n₁ = 9
n₂ = 9
U₂ = 33
p = ns
## Table II

Comparison of pre to post test scores on the Mean Length of Response test.

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Rx</th>
<th>Ry</th>
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<tbody>
<tr>
<td>4.37</td>
<td>4.00</td>
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<tr>
<td>4.07</td>
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<td>17</td>
<td>13.5</td>
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<td>4.01</td>
<td>3.52</td>
<td>16</td>
<td>12</td>
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<tr>
<td>3.80</td>
<td>3.34</td>
<td>13.5</td>
<td>11</td>
</tr>
<tr>
<td>3.00</td>
<td>3.29</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>2.95</td>
<td>2.76</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>2.17</td>
<td>2.75</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>2.08</td>
<td>2.40</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>1.30</td>
<td>2.03</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

X = pre test raw scores  
Y = post test raw scores  
Rx,Ry = individual rank of each raw score  

\[ n_1 = 9 \]  
\[ n_2 = 9 \]  
\[ U_2 = 44.5 \]  
\[ p = ns \]
Table III

Comparison by sex of pre to post test difference scores on the Peabody Picture Vocabulary test.

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Rx</th>
<th>Ry</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5</td>
<td>7.5</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>2.5</td>
<td>5.0</td>
<td>3.5</td>
<td>8</td>
</tr>
<tr>
<td>1.5</td>
<td>3.0</td>
<td>2</td>
<td>5.5</td>
</tr>
<tr>
<td>.5</td>
<td>3.0</td>
<td>1</td>
<td>5.5</td>
</tr>
<tr>
<td>2.5</td>
<td></td>
<td></td>
<td>3.5</td>
</tr>
</tbody>
</table>

- $X$ = average of pre-post test difference scores for males
- $Y$ = average of pre-post test difference scores for females
- $Rx, Ry$ = individual rank of difference scores

- $n_1 = 4$
- $n_2 = 5$
- $U_2 = 3.5$
- $p = ns$
CONCLUSIONS, DISCUSSION
AND
IMPLICATIONS FOR FUTURE RESEARCH

The results of this study fail to support the theory that this short-term total academic approach program will cause significant change for socially disadvantaged children in either of the two areas tested. A comparison of the raw data from the two tests shows that the subjects who were most affected by the treatment program were those who initially scored lowest. All subjects demonstrated a change in the desired direction on the Peabody Picture Vocabulary Test with several scores showing an increase as great as six months in age level when computed on the Peabody Picture Vocabulary Test scale. The random increase and decrease on the Mean Length of Response test shows only a few of the lower scores increasing enough to possibly represent a meaningful change in the desired direction. Data from Table III shows generally a greater increase on the Peabody Picture Vocabulary Test scores for females than for males. This change is not reflective of a consciously induced variable of the experiment nor is it due to any particular emphasis on the part of the tutors toward females. For this particular trend to be thoroughly tested, more experimentation would be necessary.

Analysis of this program concerning probable reasons for the results answers several important questions. The imperative element of time involved in treatment appears
to be second only to the quality and type of treatment itself. The aspect of time, for a total academic program stressing all the modalities necessary for success in the public school system must be long enough for the subjects to become successful in all of the areas. In this study all children demonstrated initial success in each area but apparently did not have enough time to reach the preset ninety percent proficiency level established by this program. Most subjects were increasing their proficiency level to the satisfaction of the experimenter even though this increase did not mature in the period of time allotted. A further complicating factor was the unexpected high rate of absenteeism. Numerous subjects missed at least one day each week almost every week of the program. Thus, this decreased the four-week treatment time significantly.

The environment for treatment should also be considered prior to the initiation of any academic program. Designated, consistent, isolated rooms should be made available for tutoring sessions. This consistent environment should ease the strain of the new tutor-subject relationship. One of the greatest changes which occurred during this program was the decrease of resistance some subjects initially had for their tutors. This decrease allowed several subjects who initially refused to communicate with their tutor to later work cooperatively with that same tutor. The subjects' ease of departure and return to the group increased with
time which is important in that group activities may be carried on without troubled interruptions.

The initial screening of this program also uncovered several hearing impairments which is an important procedure for immediate referral and future exposure to an academic environment. This discovery of mild hearing loss at this early age may prevent complications in the future and possibly affect school placement. Early hearing screening is an important consideration for all children prior to school enrollment.

The greatest single implication the researcher drew from this program was that of a definite need for a preacademic training program for the socially disadvantaged child. The mild academic change noted in this short period is a promising indication of the changes which could occur in a treatment program considerably longer than four weeks. Indications point to an adequate period of time of closer to sixteen weeks, i.e., this program only covered approximately twenty-five percent of the desired material. Socially acceptable behavioral goals could easily be introduced into this type of program which would work as reinforcers to the academic program. Social goals such as following directions, remaining seated, and the correct use of materials would reward behavioral success which must precede academic success. The findings of this study have continued exposing the need for preacademic programs for the socially disadvantaged child.
Auditory-Listening Performance Tasks

1. Oral Imitation of Speech Sounds
2. Auditory Recognition
3. Auditory Discrimination
4. Auditory Comprehension of Oral Commands
5. Auditory Comprehension of Questions (Yes/No)
6. Auditory Retention of Number Series
7. Auditory Retention of Sentences

Visual-Pre-Reading Performance Tasks

1. Not Applicable
2. Visual Recognition (Picture)
3. Visual Recognition (Word and Picture)
4. Auditory-Visual Recognition (Spoken Word to Printed Word)
5. Basic Oral Reading of Isolated Words

Speech-Oral Language Performance Tasks

1. Tongue, Lip and Jaw Exercises
2. Not Applicable
3. Sentence Completion
4. Question and Answer
5. Autobiographical Information
6. Autonyms
Visomotor-Writing Performance Tasks

1. Tracing
2. Copying
3. Dictation

Numbers and Arithmetic

1. Size
2. Numbers
3. Counting
4. Addition
5. Subtraction
FOOTNOTES


15 Steve Weinberg, ed. "The Children's Re-education Center An Overview," Re-education Program State of Tennessee, Department of Mental Health


26 For additional reinforcing information concerning programs similar to those previously noted in the discussion of various programs, see footnotes 27, 28, 29, and 30. For a brief general description of language development see footnote 31, and for further information concerning the debate of language development of the disadvantaged child see footnotes 32, 33, and 34. On occasions studies have noted variables not mentioned here that are important to the overall plan of a treatment program. See footnotes 35, 36, 37 for such considerations.


41 For additional information concerning MLR see footnotes 42, 43, 44, and 45.


BIBLIOGRAPHY


