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ABSTRACT

The essential goal of the Maclay On-Site Training Project is "to develop a method for training teachers who will be effective with the educationally disadvantaged." Although this final report summarizes the objectives and design of the overall project and its five components, its emphasis is on research developments related to ways of evaluating teacher effectiveness (i.e., the ability to change pupils, to improve pupil attitude toward school, and to eliminate the linguistic deficiencies that limit student achievement). Experimental research with a specially constructed eye camera (designed to measure pupillary dilation as an indicator of attitude) demonstrated this attitude measure to be reliable and valid in the school situation. Research into diagnosis and remediation of specific linguistic deficiencies of a selected group of educationally disadvantaged pupils involved (1) an analytical study which showed positive results in describing the linguistic deficiency, (2) a summer program undertaken to design specific instructional procedures aimed at remediation (described in appendix A), and (3) an evaluation of the effectiveness of these procedures as applied in the classroom (to be completed in the near future). Also described is the approach used in determining the effects of the project on teacher trainees (an approach based on multiple measurements which provide profile descriptions of successful trainees). (Author/ES)

MACLAY ON-SITE TRAINING PROJECT (MOST)

A Project in Compensatory Education

at

SAN FERNANDO VALLEY STATE COLLEGE
18111 Nordhoff Street
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FINAL REPORT

Summer, 1967

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MACLAY ON-SITE TRAINING PROJECT (MOST)
A PROJECT IN TEACHER EDUCATION

INTRODUCTION

The Maclay On-Site Training Project was initiated September 1, 1966, under the auspices of San Fernando Valley State College, the Los Angeles City School Districts and the Office of Compensatory Education of the State of California. An exploratory project to the MOST Project under the terms of a proposal submitted to the Bureau of Compensatory Education, dated March 8, 1966, was financed by the McAteer Compensatory Education Act through August 31, 1966. The MOST Project developed a program of demonstration, in-service and pre-service teacher education and research that will constitute the basis for a longitudinal study in compensatory education and for an increasingly comprehensive program in teacher education, both pre-service and in-service.

The Maclay On-Site Training Project had strong support from the college, the school district, and the cooperating junior high school (Maclay Junior High School in Los Angeles City School Districts) with which it works. The necessary approvals from college and district personnel were secured.

This report was written by the staff members of the Maclay On-Site Training Project (MOST). Each member reported on his phase of the project.

Three of the five components of the project were continuing programs, funded by the McAteer Compensatory Act as of Spring and Summer 1966. These were: The Maclay Junior High School Compensatory Education Science Project, The Maclay Junior High School Mathematics Project and Preparing Pre-Service Teachers to Teach Disadvantaged Youth Project. The In-Service Education Program in the Sociology and Psychology of Compensatory Education component was initiated in the Fall Semester, 1966. The Project in Compensatory Junior High School Social Studies began phase I, the planning stage, in Fall, 1966. The Social Studies Project was implemented in the classroom in the Spring semester, 1967.

Two additional research projects were initiated. One project using specially constructed camera equipment attempted to obtain psychological indices of attitudes; the other provided diagnosis and remediation of specific linguistic deficiencies of a selected group of the Maclay pupils.

Institutional changes have taken place at San Fernando Valley State College as a result of the project. For the Fall Semester, 1967, courses in the Psychological Foundations of Education and Social and Philosophical Foundations of Education have been designated as special courses emphasizing compensatory education for disadvantaged students and are so noted in the schedule of classes.

RATIONALE FOR THE PROJECT

1. Assumptions for Development of Rationale

Certain assumptions underlie the activities carried on in the project to date. These are:

a. Training programs for teachers of the educationally disadvantaged child should address themselves to the specific problems of this group of learners.

b. Teacher training programs may need to depart from existing programs.

c. The teacher training program must produce teachers able to decrease the educational disadvantage of learners.

These assumptions have led the project staff to a formulation of the specific problems of the educationally disadvantaged child. Consistent with the specific problems, curricular variations were designed so that the teacher trainees could participate in different kinds of educative efforts. Finally, procedures for evaluating the success of the programs were developed in terms of whether the desired changes in the learners had been secured.

2. Specific Problems of Target Learners

The Maclay target group are pupils who fall into the lower achievement sections, who obtain low grades in these sections, and who score low on standardized tests such as the California Test of Mental Maturity and the Wide-Range Achievement Test.

The assumption for explaining the deficit of the Maclay target group is that educationally disadvantaged children are lacking in language ability. This assumption is consistent with a review of the literature.

Bernstein (1961) and Loban (1965) concur that the language of the lower socio-economic class is inadequate for dealing with complex or hypothetical ideas and other skills important to achievement at school-oriented tasks.

Bloom, Davis and Hess (1965) point out that, "these cognitive [language] deficiencies become most evident in the later elementary and junior high school grades when the subject matter typically requires such abilities."

Bereiter and Engelmann (1966) are also concerned with the language problem; they have selected specific language deficits and developed a remediation program for pre-school children. Loban (1965) has shown the need for continuity of language remediation programs throughout the elementary and secondary school experience.

It follows that exemplary programs in training teachers of educationally disadvantaged pupils should: 1) focus the attention of the teacher trainees upon language problems of the educationally disadvantaged child, and 2) bring about improvement in pupils' language skills.

For purposes of evaluation and program design it became essential to know as much as possible about the specific language deficiencies of the Maclay learners. A study procedure was formulated in consultation with linguistic specialists wherein samples of the learners' language patterns were obtained from non-verbal stimulus materials. The responses obtained were coded and tabulated in order to discover the most frequent kinds of errors.

Initial findings suggested that remediation efforts could be focused upon relatively few problems, mostly bound up with what immediately precedes and succeeds nouns. A full account of the investigation is being prepared by the linguistics research assistant, Neil Chavkin, who supervised the analysis, and will be submitted for professional publication at the earliest possible date. The analytical scheme used to code linguistic responses represents an extension of existing systems and should be examined and critiqued in the professional literature.

In light of the findings of the descriptive linguistic study, a six-week summer program was undertaken to attempt the design of specific instructional procedures aimed at remediation. (See Appendix A)

Briefly, twenty-eight Negro students were randomly assigned to two groups, one taught language via "traditional" methods and one taught in light of the findings of the descriptive study. Evaluation will be completed and analyzed during the latter part of August, 1967. Evaluation will be through post-test comparison of group performance on both special linguistic tests and the California Test of Mental Maturity.

3. Evaluation of Project Activities

The evaluation of the Project was organized to be consistent with the rationale of the project, mentioned above, and the situation of the educationally disadvantaged at Maclay Junior High School.

Briefly, an educationally disadvantaged pupil is categorized as such because of his low scores on tests used by the school district. The principle reason for the low scores, assumed from an extensive study of the problem, is a language deficit. A correction of the deficit should lead to higher scores on tests, and to this extent, lessen the degree to which a student is disadvantaged. Therefore, the first step in the evaluation of the project was to assess the improvement of the educationally disadvantaged pupil in terms of test scores. The second step in the evaluation of the project was to determine the affects of the project on the teacher trainees. To gain as much information as possible, multiple measurements were made on the trainees to provide profile descriptions of the trainees who were successful in working with the educationally disadvantaged pupils.

A. Method Used for Evaluating the Maclay Pupils

A "Posttest-Only Control Group Design" as described by Gage (1963) was used with the Maclay pupils:

The first step for the evaluation of the Maclay pupils was to randomize A7 pupils in the "C" section (low achievement section) into two groups. One group was used for control; the other, received all of the project's treatment including tutoring, a treatment that was assumed to lend itself well to improved student verbal behavior. There was a slight contamination of the control group because of component activities. The two groups were compared at the end of the semester. Comparisons were made with the California Test of Mental Maturity, level two, and pupillary dilation measurements. Pupillary dilation toward slides containing school content was used as a measure of affect. Two questions were relevant for comparing the groups: 1) Did the treatment group obtain higher language scores on the California Test of Mental Maturity? 2) Did the treatment group obtain higher attitude scores as measured by pupillary dilation toward stimuli containing school content?

Both language and attitude scores were higher for the treatment group. The statistical "t" comparisons were not significant at the .05 level. For the comparison of mean attitude scores, the difference between groups was minimal, $t = .82$. The comparison between the mean language scores was encouraging. The difference between the treatment and control groups produced a "t" of 1.54, $p < .065$. "t" values were calculated for uncorrelated samples and probability values calculated for one-tailed tests.

B. Method Used for Evaluating Trainees

One significant change noted in the trainees during their participation in the project was measured by a "Questionnaire on Social Principles and Policies." The pre-test was given at the start of the semester, the post-test at the end. Three social characteristics are measured by the questionnaire which was forwarded to the project by Dr. L. G. Thomas of Stanford University. The three characteristics are: Paternalism, Individualism and Pragmatic Liberalism. Following are statements from the questionnaire that represent the respective characteristics: for Paternalism, "An ideal way to show respect for others, especially when they are not as competent as you are, is to take over their chief problems and do the solving for them," for Individualism, "Each person had better look out for himself because no one else will -- or should," for Pragmatic Liberalism, "Students naturally want to learn what is good for them, providing they have a genuine part in deciding what is good." The change noted on the post-test was a decrease on scores for Paternalism and an increase on scores for Pragmatic Liberalism. (table

Other measures of the trainees included the following:

1. A "Situational Test" devised by project staff to measure the extent to which trainees promoted structured language from educationally disadvantaged pupils.

2. A sociogram that measured the extent to which trainees were perceived by their peers as being effective with educationally disadvantaged pupils.

3. Staff ratings that measured the extent to which staff members perceived the trainees as being effective teachers of the educationally disadvantaged.

4. A "Project Evaluation" that measured the extent to which trainees perceived various aspects of the project as important for training teachers of the educationally disadvantaged.

5. A standardized test of values (Study of Values Allport, Vernon, and Lindzey, third edition, Houghton Mifflin Co., Boston) that measured the extent to which a person's values could be characterized as theoretical, economic, aesthetic, social, political or religious.

6. A pupillary dilation measurement which was used as an index of trainee attitude toward a disadvantaged school situation. (This measurement was obtained by having the trainees view 30mm slides that contained content relevant to a disadvantaged school situation.)

All scores from the above measurements were intercorrelated to determine profile descriptions of the trainees who scored high on the Situational Test and who received high ratings by project staff. Trainees who scored high on the Situational Test, an indication of the extent to which the trainee promotes structured language, tended to score low on the "economic" measurement of the Study of Values and received high ratings by project staff. Trainees who received high staff ratings tended to score high on the Situational Test, score low on the "Theoretical" and "Economic" measurements of the Study of Values scored high on the "Social" measurement of the Study of Values and received high peer ratings. All relationships mentioned are significant correlations at the .05 level. These relationships afford suggestions for the selection of trainees for the educationally disadvantaged; also, they imply possible useful measurement for further evaluations. (table 2)

OBJECTIVES AND DESIGN

A. Preparing Pre-Service Teachers to Teach Disadvantaged Youth Project

1. Objectives

   a. To acquire skills in teaching disadvantaged pupils of low achievement,

   b. To work as teacher trainees with teachers who teach disadvantaged pupils,

   c. To gain knowledge of disadvantaged youth through tutorial and informal relationships.

2. Design

   This component involved the direct experiences of college students on the site of the public school. College students served as teacher trainees in classrooms containing a high percentage of disadvantaged youth. A number of other settings provided college students with opportunities to come into contact with disadvantaged youth and their families. Professors of educational psychology, educational sociology, curriculum, methods and reading capitalized on the direct experiences of the college students to combine theory and practice in a realistic setting. College students acted as observers and participants in demonstration programs in mathematics, science and social studies for disadvantaged youth.

B. The Maclay Junior High School Compensatory Education Social Studies Projec

1. Objectives

   a. To increase the effectiveness of social studies teachers in the teaching of disadvantaged youth,

   b. To develop a model program of compensatory junior high school social studies education suitable for replication in other junior high schools,

   c. To develop a social studies language skills and reading program correlated with a multimedia approach to junior high school social studies teaching,

   d. To implement the new state junior high school American History textbook, Land of the Free, adopted for use, fall, 1967.

2. Design

   The theoretical model governing the selection of techniques and materials in the Social Studies Component was aimed basically toward increasing the motivation of disadvantaged students toward school achievement. Specific procedures were based on the assumption that

cognitive learnings cannot be separated from those in the affective domain. The integration of the two categories of learning was considered at every level.

C. A Compensatory Education Project in Junior High School Mathematics

1. Objectives

The overall objective was to develop a teaching program and learning environment that would inspire disadvantaged junior high school students to achieve their maximum level of mathematics proficiency and appreciation.

Specifically the objectives at Maclay Junior High School were to:

a. Develop a teaching-learning model for mathematics,

b. Develop a favorable classroom situation, now called the mathematics laboratory, in which students and teachers would have a wide range of different activities involving mathematics,

c. Provide the necessary technology for outfitting a mathematics laboratory,

d. Develop instructional units to be used in conjunction with the equipment provided in the laboratory,

e. Develop a teacher training program, both pre-service and in-service, that would provide highly skilled and motivated teachers who would use a variety of techniques in teaching mathematics to disadvantaged junior high students,

f. Make available to other schools the results of this approach in teaching mathematics.

2. Design

The mathematics component emphasized a total approach to improving mathematics learning. It involved not only the junior high pupils, whose achievement was generally very low, but also the junior high school mathematics teaching staff, college student teachers, college students taking courses preparing them for future teaching in mathematics, and college specialists in various related fields.

D. A Compensatory Education Project in Junior High School Science

1. Objectives

a. To increase the effectiveness of science teachers in the teaching of disadvantaged youth,

b. To develop a model program of compensatory junior high school science education suitable for replication in other junior high schools,

c. To develop a science language skills program correlated with a multimedia approach to junior high school science teaching,

d. To implement the new state junior high school science textbooks adopted for use, fall, 1967,

e. To provide enriched laboratory experiences for pre-service science teachers.

2. Design

The science component emphasized the in-service and pre-service education of science teachers and the development of a demonstration program in compensatory junior high school science. In-service education stressed methods and procedures involved in the use of science instructional materials and methods for implementing the new state-adopted science textbooks.

E. In-Service Education Project in the Sociology and Psychology of Compensatory Education

1. Objectives

The purpose of this component was to develop in-service education for teachers and administrators and to provide more effective help and guidance for disadvantaged pupils in the following way:

a. Increase awareness of and sensitivity to the scope and complexity of the problems of disadvantaged pupils.

b. Learn to recognize and utilize strengths in the culture of disadvantaged students in developing effective instructional approaches and materials.

c. Explore and evaluate methods of developing learning abilities of disadvantaged students.

d. Increase teaching effectiveness, especially in the area of language, by developing attitudes that will allow for critical self-appraisal.

e. Help to develop a climate where teachers and administrators can openly and frankly discuss their roles and problems in meeting the needs of disadvantaged students.

2. Design

This project consisted of ten sessions, five in the Fall of 1966 and five in the Spring of 1967. The sessions were held on Saturday mornings and were offered for the teachers and administrators of Maclay Junior High School. Participants were expected to attend sessions regularly.

APPENDIX A

MACLAY ON-SITE TRAINING PROJECT
EXPERIMENTAL LINGUISTIC PROGRAM

Part I of the Maclay On-Site Training Project Experimental Language Project substantiated the hypothesis that deviations from standard English usage made by members of any linguistically based ethnic community occur in consistent patterns. It verified the assumption that the educationally disadvantaged learner uses these deviation patterns more frequently than does the educationally advantaged learner. Furthermore, these deviation patterns are categorically different from those of the educationally advantaged learner. These patterns are shared and reinforced[1] by the entire community, and may be unique within that community.

The classified educationally disadvantaged learner of any ethnic group utilizes his community's deviation language patterns and takes these patterns as being standard English. The non-educationally disadvantaged learner, while he may know and be able to utilize his ethnic community's language patterns, does not take these patterns as being standard English.

The purpose of this study is to try to discover effective teaching methods which will result in allowing the educationally disadvantaged student to learn and to effectively employ standard English usage. This does not imply that an "unteaching" of ethnic language patterns must be taught, but that the procedure for a recognition of language patterns as either standard or non-standard English usage be taught.

The underlying philosophy on which all of the following teaching methods are based is as follows: The current teaching methods of standard English have had little or no effect upon the educationally disadvantaged student, as illustrated in his scores on standardized English tests. If the student could be taught some of the techniques used by linguists, anthropologists, and ethnographers to discover the syntax and semantics (grammar and meaning) of unknown languages, the student could use these techniques to discover the syntax and semantics of standard English. The student could be made to understand the theory of language as a system and the methodology of how to discover a language's system. He, when motivated to do so, would then be able to systematically and semi-scientifically discover what is standard English, what patterns of his own speech are considered as "ethnic jargon," and what basic linguistic rule any particular syntactical pattern is based on. That is, the student would be able to figure out what portions of his own speech are standard English and what portions are ethnic jargon. Also, with a minimum knowledge of English syntax the student would be able to change his ethnic language patterns into patterns of standard English.

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[1] Deviating linguistical patterns can differ from community to community even though the community members may be of the same ethnic background.

Table I

Mean Pre-test, Post-test and Change Scores Obtained from "Questionaire on Social Principles and Policies" (N=22)

Paternalism	-15.1	-34.2	-18.7*
Pragmatic Liberalism	15.2	26.9	12.1*
Individualism	- 4.4	- 7.5	- 4.6

*The major change was in increase in Pragmatic Liberalism and a decrease in Paternalism.

Table II

Significant Correlations[1] Between Variables Measured on Trainees (N=22)

	Staff Ratings	Sociogram	"Economic" Values	"Theoretical" Values	"Social" Values [2]
Situational Test	.48		-.50		
Staff Ratings		.67	-.44	-.52	.50

1. $p < .05$, for all correlations

2. refers to measurements taken from "Study of Values."