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THE NATIONAL TEACHER CORPS PROGRAM, 1966-67 EVALUATION REPORT.

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A PROJECT TO DETERMINE THE EFFECTIVENESS OF NATIONAL TEACHER CORPS (NTC) INTERNS IN THE ATLANTA, GEORGIA SCHOOL SYSTEM WAS DESIGNED TO FIND OUT IF THE INTERNS HAD HELPED THE DISADVANTAGED PUPILS IN THEIR CLASSES TO RAISE ACHIEVEMENT LEVELS AND IMPROVE SELF-CONCEPTS. SPECIFIC RESEARCH OBJECTIVES WERE (1) TO ASSESS THE PROGRESS IN VERBAL MENTAL AGE ATTAINED BY NTC PUPILS AS MEASURED BY A PRE- AND POSTTEST ON THE PEABODY PICTURE VOCABULARY TEST AND THE GOODENOUGH DRAW-A-MAN TEST, (2) TO COMPARE THE SELF-CONCEPTS OF THE NTC PUPILS WITH THOSE OF A SIMILAR GROUP OF PUPILS BY USING A TEACHER CHECK LIST DEVELOPED BY THE EVALUATION COMMITTEE, (3) TO COMPARE PUPIL READINESS FOR FIRST GRADE WITH THAT OF KINDERGARTEN PUPILS A YEAR EARLIER (WHO HAD NOT HAD INTERNS) BY USING THE METROPOLITAN READING READINESS TEST, FORM A, AND (4) TO COMPARE TEACHER ATTITUDES OF NTC INTERNS WITH THOSE OF OTHER BEGINNING TEACHERS OF TITLE I AND NON-TITLE I SCHOOLS BY MEANS OF THE MINNESOTA ATTITUDE INVENTORY. STATISTICAL TREATMENT OF THE DATA COLLECTED ON A VARIETY OF MEASURES SHOWED THAT THE NTC INTERNS POSITIVELY AFFECTED THE CHILDREN'S LANGUAGE AND SELF-CONCEPT DEVELOPMENT AND IMPROVED THEIR READINESS FOR FIRST GRADE. THE NTC INTERNS EXHIBITED ATTITUDES ASSOCIATED WITH EFFECTIVE TEACHING MORE OFTEN AND TO A GREATER EXTENT THAN DID REGULAR TEACHERS. (MS)

THE NATIONAL TEACHER CORPS PROGRAM

1966-67 EVALUATION REPORT

ATLANTA PUBLIC SCHOOLS
ATLANTA, GEORGIA

THE NATIONAL TEACHER CORPS PROGRAM

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1966-67 EVALUATION REPORT

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I. INTRODUCTION

A. General

Under the provisions of Title V of the Higher Education Act of 1965, Public Law 89-329, the National Teacher Corps (NTC) was introduced into the Atlanta Public Schools in the fall of 1966 as an integral part of the master plan for improving the educational opportunities for boys and girls in Atlanta. The specific purposes of this program were: (1) to strengthen educational opportunities of kindergarten pupils in those schools having a high concentration of low-income families, and (2) to train and prepare teachers for service in these schools.

The National Teacher Corps in Atlanta was a pilot program which represented a joint effort between the University of Georgia and the Atlanta Public School System. The University of Georgia was selected as the cooperating institution of higher learning because of its close cooperation with the Atlanta Public School System and because it was the nearest institution to Atlanta which has a program for preparing kindergarten teachers. University of Georgia personnel and members of the system-wide administrative and instructional staff of the Atlanta Public School System worked diligently to develop and provide the preservice and inservice preparation needed by the interns.

Five experienced teachers were selected from among Atlanta kindergarten teachers who had exhibited proficiency in instructional procedures, in relationships with other professional personnel, pupils and parents, as well as in professional growth and development. The U. S. Office of Education recruited 27 interns for service in Atlanta. The experienced teachers supplemented both the instructional program of the local educational agency and the professional teacher training program of the institution of higher education.

The first six weeks of the preservice program took place on the campus of the University of Georgia and included course work intended to orient the group of trainees to the problems of poverty, introduce them to the learning process and the curriculum of the

kindergarten, and provide laboratory experiences through the nearby Headstart programs, the University Laboratory Preschool, and selected local day care centers. The final three weeks of preservice training took place in Atlanta, where each intern served as a volunteer in one of the Headstart programs. Further course work supplemented their orientation to the problems of poverty in a large urban community. This, combined with visits to the community agencies such as EOA, community health centers, Child Guidance Clinic, Grady Hospital, the zoo and others, gave them knowledge of community resources. Through meetings with the Atlanta school personnel of the instructional and administrative staff, interns learned of policies, rules and administrative regulations of the school system. The corpsmen were also able to visit the specific schools and neighborhoods where they would shortly be working. This policy of combining theory and practice was continued into the inservice phase of the program. As the interns worked in the schools and community, they continued course work which will result in a Master's Degree in Early Childhood Education.

The inservice period began immediately upon conclusion of the preservice phase and corresponded with the opening of the school year. Five teams composed of one experienced (lead teacher) and from two to five interns each were assigned to kindergarten classes in seven schools. Each team had one male member, each was racially integrated, and both white and Negro children were served by the teams.

The problem of evaluation was examined continuously throughout the program by individuals involved in the activity. This was done so that a continuing appraisal would feed back into the program ways of improving, enhancing, or strengthening the activities. With this idea in mind, a team of three lead teachers was chosen to prepare and carry out, with assistance provided by the Division of Research and Development, a plan which would provide data in certain areas for assessing the program's effectiveness. The lead teachers, who were familiar with both school and community resources and experienced in kindergarten curriculum, prepared to select areas for specific research. Members of the corps and the cooperating classroom teachers were alerted to the need for examining and trying new approaches to helping the children, and to the need for continuous evaluation. The evaluation

team selected four areas of detailed investigation: (1) language development, (2) self-concept, (3) readiness for first grade, and (4) teacher attitudes.

The 27 National Teacher Corps interns who began work in Atlanta in late August ranged in age from 21 to 36. Each had expressed a desire to work in poverty areas and each brought special interests and diverse backgrounds based on nation-wide and even international experiences. The majority had not pursued undergraduate training in the field of education. Table I shows the previous residence, undergraduate training, and status of interns with reference to the program. Intern D had served the Peace Corps in Liberia before joining the National Teacher Corps. Intern R served a period of time with the Vista Program in Pennsylvania. The five male interns remained with the program even though none of them had expected to work with young children. While affording the children many new experiences, they also provided a male image.

Table I

PREVIOUS RESIDENCE, UNDERGRADUATE COLLEGE MAJOR(S) AND MINOR(S) BY INTERN

	Intern	Previous Residence	College Major(s)	College Minor(s)	Completed One Year of Inservice	Known t Be Stil in the Field o Educati
A.	Elaine Bolton	Washington	Political Science	History & French	X	
B.	Georgia Bradley	Louisiana	Elementary Education		X	
C.	Arlene Cwiklinski	Wisconsin	Psychology		X	
D.	Luke Del Orto	California	Penology	Psychology	X	
E.	Julius Dudley	Georgia	Social Science		X	
F.	Cornelia Fulton	S. Carolina	Elementary Education	Psychology		
G.	Merilyn Graham	Florida	Social Science			
H.	Ellen Grant	Massachusetts	History			
I.	Flora Hall	Alabama	Elementary Education	Music	X	
J.	Jack Hargrove	Alabama	Political Science		X	
K.	Thomasine Haskins	Virginia	Sociology		X	
L.	Martha Hornbeak	Alabama	Education	English Spanish Philosophy		
M.	Mattie Jones	Georgia	English & Education		X	
N.	Helen Latham	Pennsylvania	Sociology & Music			
O.	Douglas Latham	Pennsylvania	History			X
P.	Kristina Morningstar	Florida	Elementary Education		X	

	Intern	Previous Residence	College Major(s)	College Minor(s)	Completed One Year of Inservice	Known to Be Still in the Field of Education
Q.	Roseanne Pope	Kentucky	English	Education		X
R.	William A. Power, III	Maryland	Speech		X	
S.	Barbara Roehm	New York	Elementary Education			X
T.	Sonya Reynante	The Phillipines	Elementary[1] Education		X[2]	
U.	Carol Ruppert	Florida	Psychology & Russian	German	X	
V.	Frances Scott	Georgia	Elementary Education			
W.	George Stone	Tennessee	English	Business & Social Science	X	
X.	Jacqueline Stratmon	Florida	Speech	Psychology		X
Y.	Sandra Underwood	Alabama	English	Speech & History		X
Z.	Andrea Williams	Virginia	Elementary Education		X	
AA.	Anne Wischan	Connecticut	French	English		

[1]Master of Arts in Education

[2]On Maternity Leave

B. The Problem

1. Statement of the Problem

The National Teacher Corps teams served in urban schools in which 50 per cent or more of the families had incomes of less than $3,000 annually. These schools and their communities face similar problems as evidenced by:

a. Excessive number of drop-outs among students and teachers.

b. Excessive number of students two, three, and four grades behind.

c. Excessive number of encounters with the law among family members.

d. Excessive number of juvenile offenders.

e. Excessive incidents of overcrowding in homes.

f. Too many children with physical and mental needs, i.e., not enough to eat, poor teeth, poor eyesight.

Environmental background of pupils from low socio-economic levels has been limited and is not the kind to promote a positive self-image and success in school. Teachers of these children need experiences which result in an orientation to the environment and learning style of these pupils. The growing body of literature dealing with the characteristics and educational needs of the culturally deprived children indicates that they need:

a. Many enriching experiences,

b. Help in developing vocabulary,

c. Help in developing language skills,

d. Understanding and supportive teachers,

e. Small groups in which individual attention can be offered,

f. A more positive image of themselves, and

g. Identification with an appropriate male image.

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2. Objectives

a. General Objectives

The overall objective of this research project was to determine the effectiveness of using, as teachers, persons not professionally trained for teaching and to determine their effectiveness on the instructional program. More particularly, the project was undertaken for the purpose of securing specific data which might prove to be of value in assessing the National Teacher Corps Program in terms of its potentiality to raise the achievement levels in the classes where the corpsmen taught.

A parallel objective was to determine if the presence of additional teachers, National Teacher Corps interns in this case, in the learning situation would positively influence the self-concepts of the pupils. The committee had difficulty in finding an instrument which was considered adequate for examining the self-concept of the kindergarten child. Consequently, a secondary purpose of the study was to develop an instrument which would fit the particular parameters of this program and which might yield sufficient validity and reliability to be useful to others concerned with a similar measurement problem.

A third and very important objective was to ascertain what effect National Teacher Corps (NTC) interns have had in helping to prepare these kindergarten children for first grade. The study may indicate some areas of instruction which should receive more emphasis by future NTC interns. It may suggest that some of the factors not assessed by this instrument may be contributing to the performance level of these children.

The final objective of the study was to determine if the attitudes of National Teacher Corps interns as measured by the Minnesota Teacher Attitude Inventory (MTAI) differ significantly from first-year teachers in both Title I (disadvantaged) and non-Title I schools.

b. Specific Objectives

1. To assess the progress in verbal mental age attained by pupils of National Teacher Corps interns as measured by a pretest and posttest on the Peabody Picture Vocabulary Test (PPVT) and the Goodenough Draw-a-Man Test (DAMT).

2. To compare the self-concept of National Teacher Corps pupils with that of a similar group of pupils, using a teacher check list.

3. To compare readiness for first grade of National Teacher Corps pupils with that of kindergarten pupils in the same school the year before without interns by use of the Metropolitan Reading Readiness Test, Form A.

4. To compare teacher attitudes of National Teacher Corps interns with those of other beginning teachers of Title I and non-Title I schools, using the Minnesota Teacher Attitude Inventory (MTAI).

II. SIGNIFICANCE OF THE PROBLEM

A. To Existing Practices

In recent years the importance of the experiences of the early years in developing the learning potential of the child has been emphasized. Research indicates that "seventeen per cent of the growth in educational achievement takes place between ages four and six."[1] It has been pointed out by many writers that the limited background of the preschool child from low socio-economic levels has been a contributing factor to retardation in school. Many studies have shown the importance of kindergarten training as an aid to adjustment and performance in first grade.[2]

Team teaching in many forms has received much recent attention in an effort to make the most efficient use of a teacher's special strengths. Many different groupings of teams, including professionals and paraprofessionals, have been suggested and tried.

There are programs already operating in the Atlanta schools under Titles I and III which are designed to capitalize on the experience of teachers; for example, an instructional team in an elementary school is led by a competent teacher who shares the benefits of her past experience with new teachers and interns. The new teachers are in turn given more free time to consult with the lead teacher because they have the assistance of the teacher aide.

On National Teacher Corps teams, the experienced teacher serving as a team leader provides help for the intern teachers, encourages free exchange of ideas among team members, and stimulates exemplary and innovative practices. Plans for future team teaching will be benefited by the ideas and experiences of presently operational teams.

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[1]Bloom, Benjamin. Stability and Change in Human Characteristics, New York: John Wiley & Sons, Inc., 1964. 110 pp.

[2]Mindess, Mary and Keliher, Alice V. "Review of Research Related to the Advantages of Kindergarten," Childhood Education, May (1967).

B. To Other Projects

The Atlanta Board of Education is in the process of developing a longitudinal program of instruction for lessening educational deprivation and for placing better trained, more competent teachers in the classroom. The National Teacher Corps Program was developed for the kindergarten level for several reasons:

1. To supplement the services provided by the Headstart and Prekindergarten programs financed by the Office of Economic Opportunity and Title I, Elementary and Secondary Education Act, respectively.

2. To serve as a foundation for the main thrust of the Title I program: improving the communicative skills of teachers in the teaching of reading and providing for them supportive services, such as counseling, social work, psychological and clerical assistance.

3. To emphasize the need for utilizing community resources.

4. To emphasize the need for involving parents more closely with the school and the education of their children. The process of drawing parents into the school early in the child's experience not only adds to their understanding of the school program but establishes a pattern which will continue throughout the child's education.

The National Teacher Corps has used, and will continue to use, the Learning Resources Center funded under Title III of the Elementary and Secondary Education Act, which helps teachers to "remove the walls of the classroom." The National Teacher Corps has served to fill the gap between Headstart programs and services provided for the primary grades and needs to be expanded to serve more schools. As an innovative approach to the training of teachers, it is similar to the Title III team teaching project and gives supportive evidence to the conclusion that the period of internship and close cooperation between school systems and institutions which train teachers can be of benefit to all parties involved.

C. To Promotion of Future Instructional Opportunities

Educators are examining many ideas concerning the improvement of instruction and preparation of teachers. More and more they recognize that college students who complete prescribed teacher preparation programs are not ready to assume the full responsibilities of a classroom. They do not represent finished products, but need assistance and guidance in order to cope with the many problems which are not included in teacher preparation programs, which arise while teaching. A partnership composed of a local educational agency and the institution of higher learning share responsibilities for training, supervising, and assisting interns during both the preservice and inservice phases of the program. The three sections which follow indicate ways in which the problem has significance for the promotion of future instructional opportunities.

Involvement between the institution of higher education and the local educational agency:

1. Extends the interdisciplinary approach to preparing teachers by:
   a. Combining training in the liberal arts with the behavioral sciences and
   b. Combining training in the liberal arts with the sociological interests in communities;
2. Serves as a career development program in which theory and practice are combined for individuals who, in general, have a liberal arts background;
3. Provides for college staff the assistance of experienced teachers with realistic views of appropriate procedures for teaching the disadvantaged;
4. Enables experienced teachers to improve their competencies through assumed leadership responsibilities; and
5. Uses problem-solving seminars to help interns make theoretically based decisions regarding actual situations.

Involvement in team activities:

1. Develops team relationships among teachers with a background of nation-wide experiences;
2. Effectively utilizes interests and talents of the groups;
3. Improves instructional procedures;
4. Results in improvement of the utilization of instructional media and materials;
5. Introduces curricular innovations;
6. Results in corpsmen helping to bring about more flexible attitudes among experienced teachers; and
7. Lowers pupil-teacher ratio, thus permitting more individual attention.

Involvement in community activities:

1. Brings parents into closer communication with the schools
   a. through home visits and
   b. through class activities involving the parents;
2. Enables interns to gain a better understanding of the environment from which their pupils come and of the attitudes and values of those pupils;
3. Results in more contacts with community resources and agencies; and
4. Increases the number of children attending kindergarten.

Studies concerning the learning disabilities of the culturally and educationally disadvantaged child point almost unanimously to a deficiency in the area of language development. Disadvantaged children entering preschool are found to be operating at a level approximately one year behind the normal child of the same age. If these children are to make some progress toward a higher level of achievement in school, improvement in this area is vital. Experimental programs for the young child, like the Bereiter and Engelman Preschool at the University of Illinois, and the Suder School in Jonesboro, Georgia, operated under the auspices of the University of Georgia, place heavy emphasis

on language activities. As might be expected, disadvantaged children tend to score somewhat higher on nonverbal tests of intelligence than on verbal measures. For this reason it was deemed advisable to include in this study a performance type of test for purposes of comparison. The one selected was the Goodenough Draw-a-Man Test.

The literature dealing with the characteristics of the culturally disadvantaged points repeatedly to the fact that most children from low socio-economic backgrounds tend to exhibit a negative self-concept. Research has shown that achievement in school is affected by this attitude so that much valuable talent is being lost to society. The typical child from the middle class environment comes to school equipped with what has been called a "hidden curriculum" which he acquires from the teaching of his parents within the home and on trips to the grocery store, zoo, around the neighborhood, and to nearby towns and far away places. These experiences and contacts with adults can foster his intellectual growth and build his self-esteem resulting in an orientation to what will be expected of him when he reaches school age. The environment of the low income child, on the other hand, is much more limited, sometimes to within an area of a few blocks from his home. Often, everyday objects found in middle class homes are lacking. Add to this, the fact that parents often do not see themselves as able to cope with daily problems due to the lack of education, inadequate job skills or membership in a minority group. The attitudes and values absorbed from such surroundings do not contribute to an adequate self-concept. National Teacher Corps interns, cognizant of this need in the children they were teaching, endeavored to promote positive self-feelings by providing small-group and one-to-one contacts with the children, and by affording many enriching and successful experiences. The evaluation team believed that an assessment of the self-concept of these children would constitute a measure of the effectiveness of the program.

This program has significance for other projects in operation in Atlanta Public Schools and for the promotion of future instructional opportunities. Nation-wide attention has been focused in recent years on early childhood as the most important time for the development of learning potential. Each stage of intellectual development must be nurtured and supported by a background of direct experiences. Unless

this nurturing takes place, the child is not ready for the next stage of development and may be permanently handicapped. It has been recognized that the experiences of the disadvantaged preschool child often do not provide this nurture. Present practice, therefore, tends to extend public education to earlier ages of children in order to provide the necessary experiences, attitudes, and values essential to success in school. Preschool programs in Atlanta schools place emphasis on self-identification as well as on the cognitive skills. Progress in the acquisition of concepts and skills is dependent upon feelings of "I can because I am a person of importance to others." This to some extent explains the emphasis on many successful experiences and individual praise as a means of ego reinforcement. Present experimental programs with three and four-year-olds may lead to a demand for public education to begin at age three or earlier, and not just for those who are considered to be culturally and educationally disadvantaged, but for all children. Kenneth Wann and his associates in their research on young children's ability to formulate and use concepts concerning the physical and social world found that the young child's capacity for learning may have been underestimated.[3] As the State of Georgia moves toward state-wide public kindergartens, the demands for teachers trained in early childhood education will be increased. Instructional opportunities for teachers trained in Atlanta's National Teacher Corps Program will be enhanced.

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[3]Wann, Kenneth, et. al. Fostering Intellectual Development in Young Children, Teachers College Press. New York: Columbia University. 1962.

III. REVIEW OF RELATED LITERATURE

Many studies during recent years have examined the environmental backgrounds of the culturally disadvantaged child in relation to his learning problems. The neighborhood is reported to be noisy, disorganized, overcrowded and austere (Reissman, 1962). The persons who come from these neighborhoods have been characterized as possessing "poor health, inadequate motivation, malnutrition, lack of personal cleanliness, absence of basic skills . . ." which result in more than normal "scholastic failure, truancy, disciplinary problems, dropouts, pupil transiency, and teacher turnover" (Passow, 1963, p. 2). The home from which a child comes is a powerful influence in shaping his behavior and self-concept. The culturally disadvantaged home is characterized by a lack of objects of all types, but is particularly lacking in the tools which are important for school, e.g., books, paper, and pencils (Deutsch, 1963). The child from such a home, therefore, comes to school ill-prepared for the experiences he will have there. A significant number of children from low socio-economic backgrounds enter school with negative self-concepts. "The self-image is vital to learning. School experiences can either reinforce invidious self-concepts . . . /or/ Conversely they can effect positive self-feelings by providing for concrete achievements and opportunities to function with competence" (Deutsch, 1964). The school has a special task to perform for these children. Language development from low socio-economic backgrounds is receiving significant emphasis in current compensatory educational programs for young children. The classic studies by McCarthy (1930), Day (1932), and Davis (1937), concur in that group differences favor children from upper socio-economic levels in practically all aspects of language studies. Young disadvantaged children have been found to function at the level of average children who are a year or more younger (Gray 1963). However, in a study intended to provide special experience during two preschool years and the first year of school, which might contribute to better intellectual processes and personal adjustments by the underprivileged child, the experimental group made a gain of 6.6 months in mental age as compared to the gain of 0.9 for the control group, when measured by the Peabody Picture Vocabulary Test. Administration to the preschool group occurred at the end of the first summer (Klaus, 1962). Increase in the level of achievement in school for children from low socio-economic backgrounds is one of the goals of the

National Teacher Corps Program. Subsequent success or lack of it in first grade will be one of the criteria for estimating the usefulness of this program for the children involved. The studies cited in the "Review of Research Related to the Advantages of Kindergarten" indicate a positive relationship of preschool experiences to success in first grade (Childhood Education, May 1967). Two recent studies related to prediction of success in first grade achievement have been completed (Shipp, 1964, and Koppitz, 1959). Figure drawings, such as the Goodenough Draw-a-Man Test used in this study, are relatively free from the language factor which characterized most standardized tests for reading readiness. Investigation of gains in intelligence by Baltimore Headstart children revealed a gain of eight to ten points over a period of six weeks (Eisenberg, 1966).

Both of these studies (Klaus, 1962, and Eisenberg, 1966) suggested that increased ability to relate to adults and the warm, friendly attitude of the teachers were significant contributing factors.

The importance of competent, well-trained and dedicated teachers for the disadvantaged cannot be overemphasized. Teachers who have the ability but not the desire to work in these areas may not be successful. Studies by Lorge (1954) and by Levine (1962) have shown the importance of the role of the school and quality teaching in offsetting educational and social deprivation.

The problem of accurately and meaningfully measuring attitudes--whether those of a teacher or of any other person--is manifestly a difficult one. According to Thurstone (1951), attitude is the sum total of man's inclinations and feelings, prejudice or bias, preconceived notion, ideas, fears, threats, and convictions about any specific topic. McKillop (1952) feels that attitude is a more or less stable tendency to respond in a negative or positive way toward any topic, institution, practice or person. Attempts to measure so complex a variable are often disappointing. Robbins (1967) developed a scale to measure teacher attitudes toward teaching as a profession but found that he was able to reveal very little about the professionalism of teachers. Edwards (1966), working at the University of California, attempted to prepare an inventory to assess dimensions of teacher personality relevant to success in educating underprivileged children. He concluded that information from behavioral sciences can be useful if translated into anecdotes describing concrete classroom behavior. Such anecdotal

information can be used by teachers to sharpen their perceptions and techniques. Still, he found the problem of precisely gauging teacher attitudes and their influence on pupils to be intricate.

The instrument used to gather data about the attitudes of the teachers in this study is the Minnesota Teacher Attitude Inventory (Cook, Leeds, and Callis, 1951). This inventory is a paper-and-pencil measure of teacher effectiveness, discriminating between child-centered, democratic teacher behavior and the subject-centered, authoritarian syndrom. It is designed to measure the attitudes of a teacher which indicate the effectiveness of his interpersonal relationships with pupils and (indirectly) satisfaction derived from teaching. The rationale of the instrument is that the attitudes of a teacher are the result of the interaction among a multitude of factors, including academic and social intelligence, general knowledge and abilities, social skills, personality traits, energy, values, and teaching techniques, and that the attitudes afford a key to the prediction of the type of classroom atmosphere a teacher will maintain.

Several studies support the notion that the MTAI is useful for the purposes of identifying attitudes and predicting the likelihood of successful teaching experiences. Downie (1953) and an associate tested the MTAI and then compared scores on that instrument with scores made by the two groups on the American Council on Education's Psychological Examination. Analyzing the data, they found that students who scored high on the MTAI tended to have a background of experience with young people as well as an expressed interest in teaching. Those receiving low scores generally did not have such experience and interest. It is possible to say, then, that the MTAI seems to discriminate between those interested in teaching and in young people and those not so inclined.

A second study conducted by Horn and Morrison (1965) examined the factoral structure of the MTAI. Results of their work suggest five co-varying patterns of items occurring in the test's structure; moreover, they make the point that while it may be useful to speak of the MTAI as measuring a single trait, it is important to recognize that several largely independent response consistencies are represented by a total score obtained with this device.

Generally, the literature shows that the lack of adequate effectiveness criteria is largely responsible for ignorance of the factors which account for success in teaching. Criteria, whether they involve personality attributes of teachers, number of years experience, number of graduate credits earned, or growth in skills to be taught, all involve some commitment on the following issues: (a) Is teacher effectiveness multi-dimensional or uni-dimensional? (b) Should teaching effectiveness be evaluated primarily in light of the intellectual, cognitive goals of education or primarily in light of the attitudinal, affective goals? Accordingly, use of the MTAI represents one approach to the question of criteria.

IV. HYPOTHESES

H_1: There is no significant difference in the mental age of kindergarten children in classes having National Teacher Corps interns from the established norms when the mental age is measured by two forms of the Peabody Picture Vocabulary Test.

H_2: There is no significant difference between verbal mental age as measured by the Peabody Picture Vocabulary Test and performance mental age as measured by the Goodenough Draw-a-Man Test in a group of kindergarten children having National Teacher Corps interns in the classroom.

H_3: There is no significant difference in readiness for first grade as measured by Form A of the Metropolitan Reading Readiness Test (MRRT) between:

a. Kindergarten children having National Teacher Corps interns and first grade children who have completed a year of kindergarten without National Teacher Corps interns.

b. Boys in kindergartens having National Teacher Corps interns and first grade boys, in the same schools, after completing a year of kindergarten without National Teacher Corps interns.

c. Girls in kindergartens having National Teacher Corps interns and first grade girls, in the same schools, who have completed a year of kindergarten without National Teacher Corps interns.

H_4: There is no significant difference in readiness for first grade as measured by Form A of the Metropolitan Reading Readiness Test among:

a. All kindergarten children in schools having National Teacher Corps teams and kindergarten children having National Teacher Corps interns in their classrooms.

b. All kindergarten boys in schools having National Teacher Corps teams and kindergarten boys having National Teacher Corps interns in their classrooms.

c. All kindergarten girls in schools having National Teacher Corps teams and kindergarten girls having National Teacher Corps interns in their classrooms.

H_5: There is no significant difference between the self-concept of the pupils in classes having NTC interns and pupils in classes of Title I schools not having the interns.

H_6: National Teacher Corps interns do not differ significantly in teacher effectiveness as measured by the Minnesota Teacher Attitude Inventory from first year teachers when the groups are controlled for National Teacher Examinations (NTE) scores and race.

V. LIMITATIONS

.. Techniques

The most serious limitation affecting this study was the element of time. Had it been possible to administer instruments to the group initially during the early weeks of school, and then again during the closing weeks, a far more accurate picture of the actual gains made by the children in language and performance would have been shown. It is assumed that if the appropriate pretests could have been administered, the differences between pretest and posttest of the Peabody Picture Vocabulary Test would have been considerably larger than those shown after a time lapse of only three months. As a result, the language instructions and other enriching activities had been underway for several months before the pretest was given. It is further assumed that a second administration of the Draw-a-Man Test after the relatively short time lapse would be of little value for the purposes of this study.

Secondly, the study is limited by the fact that it does not assess all areas of language development, but only measures learning vocabulary and, therefore, does not give a complete picture of language skills of the pupils tested.

Other observed limitations are as follows:

1. The bias of the observer cannot be ignored. An individual who is prejudiced against a particular race, religious group or nationality, or one who is insecure in his own relationships with others, will have difficulty in making reliable judgements.
2. The background and training of the observer will certainly enter the picture in terms of how he interprets certain items on the check list.
3. Certain limitations are inherent in the instruments.
4. It is impossible to assess all the variables which affect the child's view of himself.
5. Conspicuously absent in these instruments are the important variables of the influences of parents and the home environment.

6. Limitations of time made it impossible in some cases to use a pre-test and posttest technique. Only one self-concept observation for each subject was possible for the comparison. The self-concept instrument has not yet been administered to middle class children.

7. The MRRT was given at the end of the kindergarten year rather than at the beginning of first grade. Kindergarten teachers were not familiar with test administration. Many were fearful that they were being tested through the performance of the children and may have given more assistance than is usual or recommended in the test procedures.

B. Subjects (Experimental)

1. Language Development, Self-Concept and Readiness for First Grade

An experimental group of 67 boys and girls was used. They were selected by stratified random sampling from the kindergarten classes having National Teacher Corps interns. The pupil-teacher ratio in these classes was ten to one.

2. Teacher Attitudes

The experimental group was comprised of fifteen randomly selected National Teacher Corps interns.

C. Comparison

1. Language Development

A comparison group was not used in this analysis. A pretest-posttest difference was incorporated into the study.

2. Self-Concept

The comparison group was randomly selected from Title I schools and from kindergartens with 25 or more pupils taught by a single teacher. The occupation of the principal breadwinner was determined for each child in both groups. A Q-sort of the combined groups was made for the purpose of establishing an index of socio-economic level. A biserial correlation was run between the two groups, and the result (biserial r = .323) showed that the experimental group's economic level was significantly associated with that of the comparison group.

3. Readiness for First Grade

A comparison group known as the All-Kindergarten Comparison Group was a stratified random sample of 92 boys and girls selected from among all kindergarten children in the seven schools in which National Teacher Corps teams were located. Each school is represented by no less than six children. A second comparison group known as the First Grade Comparison Group was a stratified random sample of 92 boys and girls selected from the first grades in the same seven schools. Before the sample was taken, all children who were repeating first grade and those who had received no kindergarten training were eliminated.

Two groups of children were used to determine an actual difference between scores for kindergarten children tested in May and first grade children tested in early September by administration of the MRRT. The kindergarteners were 40 children tested by their teacher in May of 1965. The first graders were children who attended first grade in 1963 and those who attended first grade in 1964. All of these children were pupils of Bethune School, one of the seven schools served by the National Teacher Corps teams.

4. Teacher Attitudes

Two comparison groups were selected. One was comprised of fifteen first-year teachers in Title I schools, and a second of fifteen non-Title I first-year teachers. The groups were matched on the basis of race and scores on NTE. It proved to be impractical to match the groups on the basis of sex and previous experience outside the school system.

VI. DEFINITIONS

1. CMMS - Columbia Mental Maturity Scale.
2. CTP - California Test of Personality.
3. Culturally Deprived - Children in urban schools in which at least fifty per cent of the parents have incomes of less than $3,000 annually.
4. DAMT - Draw-a-Man Test.
5. Language Development - The child's "hearing vocabulary" as measured by the Peabody Picture Vocabulary Test.
6. MA - Mental Age.
7. MRRT - Metropolitan Reading Readiness Test.
8. MTAI - Minnesota Teacher Attitude Inventory, a test of teacher attitudes which have been attributed to effectiveness.
9. National Teacher Corps Intern - An individual involved in the joint program of the Atlanta Public School System and the University of Georgia designed to intervene in the education of disadvantaged children and to train teachers to work with such children.
10. NTE - National Teachers' Examination.
11. PPVT - Peabody Picture Vocabulary Test.
12. PSA-K Check List - The instrument developed by the evaluation committee to measure personal and social adjustment in kindergarten pupils.
13. Readiness for First Grade - The skills and attributes assessed by the combined raw scores of the subtests of the Metropolitan Reading Readiness Test, Form A.
14. Self-Concept - The kindergarten child's personal and social adjustment to school as indicated by certain described behaviors which are assumed to reflect the child's feelings about himself, his peers and associates, and school activities.
15. Title I Schools - Schools in attendance areas where low-income families are concentrated. A family is deemed to be a low-income family if it has an annual income of less than $2,000.
16. VSMM - Vineland Scale of Mental Maturity.
17. WISC - Wechsler Intelligence Scale for Children.

VII. PROCEDURES

A. Test Instruments and Procedures

1. Language Abilities

The test instruments used to measure language abilities were the Peabody Picture Vocabulary Test, Forms A and B, and the Goodenough Draw-a-Man Test. Pertinent studies have suggested the the PPVT (Klaus, 1964) and the DAMT (Shipp, 1964) have predictive value for success in first grade. The Metropolitan Reading Readiness Test, the instrument used to measure readiness for first grade, is widely used to assess this characteristic. Although the test was not administered as a part of this research, the scores were used as explained in the section on statistical procedures.

Each child was pretested during the month of February, using Form A of the Peabody Picture Vocabulary Test. One member of the evaluation committee did all the testing. The Goodenough Draw-a-Man Test was administered immediately following the initial testing by the same examiner. A time lapse of three months separated the administration of Form A and Form B of the Peabody Picture Vocabulary Test. The second form was administered by the same examiner. The DAMT was given only once, at the initial session.

2. Self-Concept

The evaluation committee sought an instrument for assessing the self-concept of the very young child which could be easily and inexpensively administered. Such instruments are relatively few in number. Those examined were the following:

a. California Test of Personality (CTP) Form AA, Kindergarten to Third.

b. Vineland Scale of Mental Maturity (VSMM)

c. Wechsler Intelligence Scale for Children (WISC)

d. Columbia Mental Maturity Scale (CMMS)

The Wechsler Intelligence Scale for Children and the Columbia Mental Maturity Scale were ruled out because of the necessity of having trained personnel to administer them and because of the time

and expense involved. The Vineland Scale of Mental Maturity was useful in suggesting some expectations of behavior in the age range from two to six. But the method of administering the instrument did not meet the needs of this study. The California Test of Personality, Form AA, seemed to present the best starting point for a solution to the problem. A closer examination of this instrument indicated that many of the questions used were not within the experience of the kindergarten child, and it was obvious that the children in National Teacher Corps classes could not answer the "yes" and "no" questions by themselves. It was even quite possible that some of them would not respond when questioned by the teacher because by November a few had not talked since the beginning of school. After further consideration, it was decided to try to devise an instrument that would assess the self-concept of the kindergarten child using the CTP, Form AA as a guide for categories and possible questions. Each member of the committee took several sections of the test and attempted to rephrase the questions in such a way that a teacher could address them to a child and record the "yes" and "no" answers. It was found that some of the questions could not be rephrased, and that some of the categories, especially those dealing with the home and attitudes toward parents, would have to be omitted. From this point on, the completion of the instrument and the setting up of procedures became the exclusive responsibility of one member of the committee.

Suggestions and advice of staff members of the Atlanta Public School System and the University of Georgia brought about further revision. Questions were converted to statements intended to describe five-year-old behavior under specific categories. The "yes" or "no" response to questions was converted to a five-point scale. The scale was worked as follows: "Always," "Most of the time," "Sometimes," "Seldom," and "Never." The teacher was asked to observe the child and then check each statement of behavior in the appropriate column according to his performance during the preceding two weeks. A numerical scale with a key for each item was set up. The low score was established as a

positive end of the scale, and the high score became the negative end. For some items the most positive check was "Always," while for others it was "Never." As a guide for teachers using the check list, a description in terms of five-year-old behavior was written for each category. Under the large heading, "Personal Adjustment," the following categories, as suggested by the California Test of Personality, were used:

a. "Self-Reliance"

b. "Sense of Personal Worth"

c. "Feelings of Belonging"

d. "Withdrawing Tendency"

e. "Nervous Symptoms"

Under the large heading, "Social Adjustment," these categories were described:

a. "Social Standards"

b. "Social Skills"

c. "Anti-Social Tendencies"

d. "School Relations"

The first two categories, "Self-Reliance" and "Sense of Personal Worth," contain seven items, while each of the other seven categories consists of five items. The items were arranged in random order for the final check list of 49 items. Included with this report is a copy of the check list, cateogry descriptions, and directions for administering. The instrument was named the Personal and Social Adjustment Check List (PSA-K).

The observers (raters) for the experimental group were the classroom teachers for each subject in the sample and one or more interns who had been directly and regularly working with the subject. The observers (raters) for the comparison group were the kindergarten classroom teachers in each school involved in the study. The author of the check list visited each school to discuss testing procedures and answer questions. Each rater was given a copy of the category descriptions, instructions for using the check

list, and one check list for each child to be rated. The experimental group was rated between the last week in February (1967) and the middle of March (1967). The comparison group was rated between the last week in April (1967) and the second week in May (1967). A period of five weeks separated the rating of the two groups. The check lists were returned to the author for scoring.

3. Readiness for First Grade

The only test instrument used in this phase of the evaluation was Form A of the Metropolitan Reading Readiness Test. A form of this test has been used as a part of the testing program for Atlanta Public Schools for many years and, data for comparison were readily available. The manual states that the tests "were devised to measure the extent to which school beginners have developed in the several skills and abilities that contribute to readiness for first grade instruction" (Manual of Directions for the Metropolitan Reading Readiness Tests, p. 3). The manual also states that the tests are designed for use either at the end of the kindergarten year or at the beginning of first grade. No separate norms are given for kindergarten. However, the manual states (p. 8) that research with earlier forms of tests suggest there may be a difference of from three to six points between scores for kindergarten administration and beginning first-grade administration.

The boys and girls in the first grade comparison group were tested in September of 1966 by their classroom teachers in accordance with the regular testing schedule for Atlanta Public Schools. The kindergarten groups were tested in May in accordance with new testing procedures in the system.

4. Teacher Attitudes

A general description of the Minnesota Teacher Attitude Inventory is given in the review of related literature which precedes this section. Specifically, the MTAI has established norms for two groups: for those preparing to teach and for those who are experienced teachers. The scoring procedure adopted is such that differences which may exist between good and poor teachers with reference to (1) faking, (2) response set, (3) test-taking attitude, and (4) role playing,

operate in the direction of increasing the validity of the test. Using the split-half method, reliability coefficients ranging from .87 to .92 have been established. Validity was established by a series of experiments in which the MTAI was administered to random samples of teachers. Their scores were then correlated with three outside criteria of teacher-pupil rapport. Validity coefficients ranging around .60 have been established.

The subjects were selected as already detailed, and the National Teacher Corps interns were asked to take the MTAI. Requests were then made to area superintendents, principals, and non-NTC teachers asking for their cooperation and participation in the study. With their compliance, the MTAI materials were mailed from the Division of Research and Development to each of the Title I and non-Title I teachers. All of them responded, and the division then scored and analyzed the test data.

VIII. FINDINGS

Table II

COMPARISON OF ACHIEVEMENT GAINS BETWEEN PRETESTS AND POSTTESTS OF THE PEABODY PICTURE VOCABULARY TEST

NTC Kindergarten	Pretest		Posttest		Difference			
	$\bar{x}_1$	s.d.	$\bar{x}_2$	s.d.	$\bar{x}_1 - \bar{x}_2$	N.	d.f.	t.
Boys & Girls	52.14	13.11	57.37	12.72	5.33	67	65	3.277*
Boys	53.21	13.80	57.97	12.39	4.76	33	31	2.052*
Girls	50.91	11.91	56.79	12.64	5.88	34	32	2.751**

* Significant at .05 level

** Significant at .01 level

$\bar{x}_1$ = mean score in months on Form A

$\bar{x}_2$ = mean score in months on Form B

The results reported in Table II indicate that the total group of boys and girls exhibited a significant gain in months (5.33). The individual groups of boys and girls each showed a gain which was significant in a positive direction. These results indicate that the impact of the NTC interns was instrumental to an increase in the vocabulary ability of the pupils. Note should be taken of the fact that the girls made a gain of approximately six months (5.88) while the boys gained approximately five (4.76).

In light of these findings, H_1 which states that there would be no significant gain in language ability as measured by the Peabody Picture Vocabulary Test must be rejected. There was, in fact, a significant gain. Extension of the analysis yields a comparison between the verbal component of intelligence and the performance aspect.

Table III

COMPARISON BETWEEN VERBAL MENTAL AGE (PPVT)
AND PERFORMANCE MENTAL AGE (DAMT)

NTC Kindergarten	Verbal		Performance		Difference			
	$\bar{x}_1$	s.d.	$\bar{x}_2$	s.d.	x_1-x_2	N.	d.f.	t.
Boys & Girls	52.14	13.11	61.06	11.09	8.92	67	65	5.878**
Boys	53.21	13.80	58.73	8.61	5.52	33	31	2.715**
Girls	52.14	13.11	61.06	11.09	8.92	67	65	5.878**

** Significant at .01 level

$\bar{x}_1$ = mean score in months as measured by the Peabody Picture Vocabulary Test.

$\bar{x}_2$ = mean score in months as measured by the Goodenough Draw-a-Man Test.

Table IV

COMPARISON BETWEEN BOYS' AND GIRLS' VERBAL MENTAL AGE (PPVT)
AND PERFORMANCE MENTAL AGE (DAMT) ABILITIES

NTC Kindergarten	Boys		Girls		Difference			
	$\bar{x}_1$	s.d.	$\bar{x}_2$	s.d.	$\bar{x}_1-\bar{x}_2$	N.	d.f.	t.
Form A (PPVT)	53.21	13.80	50.91	11.91	2.30	67	65	1.019
Form B (PPVT)	57.97	12.39	56.79	12.64	1.18	67	65	.537
DAMT	58.73	8.61	63.18	12.54	4.45	67	65	2.352*

* Significant at .05 level

The results (Table III) indicate that the total group of boys and girls showed a significant difference in months (8.92) in favor of performance abilities. A similar trend is exhibited for the individual groups of boys and girls. It can be generalized, then, that the pupils did not score similarly on the verbal and performance instruments.

The findings indicate that boys and girls tended to display similar results on the verbal dimensions (Table IV). Neither the difference in scores in months on the PPVT, Form A (2.30) nor Form B (1.18) was statistically significant at the .05 level of confidence. The girls, though, showed a significantly superior performance ability in months (4.45) than did the boys. The implication, then, is that the girls of this sample are superior to boys in performance levels when that particular ability is a function of the Draw-a-Man Test.

Interpretation of the results of the analyses point to the fact that, first of all, the pupils' verbal ability was superior to their performance level. The verbal dimension further indicates that boys and girls are similar in their characteristics. But the females showed a greater ability in performance level than did the boys. In light of this, H_2, which states that there is no significant difference between the verbal ability and performance ability in the kindergarten group, is rejected. Note should be taken of the fact, though, that some sex differences did occur (DAMT).

These conclusions logically lead to the next phase of the evaluation. Table V reports the correlation coefficients of the verbal instrument (PPVT) and the performance instrument (DAMT) with the Metropolitan Reading Readiness Test.

Table V

CORRELATION COEFFICIENTS OF THE PEABODY PICTURE VOCABULARY TEST, FORM B AND THE DRAW-A-MAN TEST WITH THE METROPOLITAN READING READINESS TEST

	r.	d.f.
PPVT (Form B) and MRRT	.41*	66
DAMT and MRRT	.33*	66

* Significant at .05 level

The data indicate that there is a significant relationship between verbal ability (PPVT) and readiness for the first grade (MRRT) r = .41. Further, there appears to be a similar positive relationship (r = .33) between performance ability (DAMT) and readiness for the first grade (MRRT). It may be concluded from the above data that verbal and performance characteristics are contributing dimensions to readiness for the first grade. The data, however, do not reveal the exact nature of the relationship. Generalizations to large atypical populations should be made.

Table VI

MEANS AND STANDARD DEVIATIONS OF THE RESULTS OF THE METROPOLITAN READING READINESS TEST

	$\bar{x}$	s.d.	N.
1st Grade (September 1964)	47.97	38.87	124
1st Grade (September 1965)	55.17	15.25	99
Kindergarten (May 1965)	46.98	9.77	40

Data from the Atlanta Public School System Testing Program were incorporated into the evaluation (Table VI). The first grade results were combined to establish a norm (50.89) which was used as a comparison figure. The kindergarten mean score (46.98) was subtracted from the first grade norm which yielded a difference score of 3.90. The objective of this procedure was to ascertain the mean gain through kindergarten so that meaningful comparisons could be established. The difference of 3.90 was added to all kindergarten groups that would be compared to first grades in the NTC evaluation. This was essentially a calibration technique which allowed a valid test for statistical significance.

Tables VII-IX present the results of the comparisons of various pupil groups on the basis of the Metropolitan Reading Readiness Test.

Table VII

COMPARISON OF PUPILS' SCORES ON THE METROPOLITAN READING READINESS TEST BETWEEN AN EXPERIMENTAL GROUP HAVING THE NTC INTERNS AND A KINDERGARTEN GROUP NOT HAVING THE INTERNS

	Experimental		Comparison				
	$\bar{x}_1$	s.d.	$\bar{x}_2$	s.d.	N.	d.f.	t.
K Boys & Girls	51.37	14.90	43.75	14.63	157	155	3.27**
K Boys	49.34	13.31	43.17	13.31	78	76	2.25*
K Girls	53.33	16.06	45.33	15.69	79	77	2.22*

* Significant at .05 level

** Significant at .01 level

Table VIII

COMPARISON OF PUPILS' SCORES ON THE METROPOLITAN READING READINESS TEST BETWEEN AN EXPERIMENTAL KINDERGARTEN GROUP HAVING THE NTC INTERNS AND A FIRST GRADE GROUP WHICH DID NOT HAVE THE INTERNS

	Experimental		Comparison				
	$\bar{x}_1$	s.d.	$\bar{x}_2$	s.d.	N.	d.f.	t.
1st Grade Boys & Girls	51.37	14.90	40.23	13.44	157	155	4.87**
1st Grade Boys	49.34	13.31	40.00	12.21	78	76	3.33**
1st Grade Girls	51.37	16.06	40.47	14.56	79	77	3.75**

** Significant at .01 level

Interpreted results of the analyses show pupils in the NTC experimental group to perform at a rate statistically superior on the Metropolitan Reading Readiness Test than do pupils in a comparison kindergarten group. The trend strongly indicates that the NTC interns positively affect pupils' readiness for the first grade.

Table IX

COMPARISON OF PUPILS' SCORES ON THE METROPOLITAN READING READINESS TEST BETWEEN KINDERGARTEN AND FIRST GRADE GROUPS

	First Grade		Kindergarten				
	$\bar{x}_1$	s.d.	$\bar{x}_2$	s.d.	N.	d.f.	t.
Boys & Girls	40.23	13.44	43.75	14.63	184	182	2.22*
Boys	40.00	12.21	43.17	13.31	92	90	1.69
Girls	40.47	14.56	45.33	15.69	92	90	1.33

* Significant at .05 level

Further analysis of the reading readiness data (Table IX) delimits no discernable trend. There is a significant difference in favor of the kindergarten group ($t = 2.22$) but sex difference exhibits no superiority on the test scores. In general, the patterns of the data in Tables VII-IX confirm the assumption that the NTC interns had a significant positive influence on the readiness for the first grade when such readiness is a function of scores on the Metropolitan Reading Readiness Test. This is true on the basis of sex differences and with combined groups. H_3 which states that such differences will not occur is rejected, then, at the .05 level of confidence.

There did occur a significant difference between the comparison kindergarten and first grade groups. The trend favored the kindergarten pupils on a combined basis but differences on the Metropolitan Reading Readiness Test scores between sexes again strongly support the case for the favorable impact of the NTC interns. In light of the results cited in Table IX, H_4, which states that there is no significant difference in readiness for the first grade as measured by the Metropolitan Reading Readiness Test, must be rejected at the .05 level of confidence, but, in general, the NTC program is vigorously supported.

These are perhaps the most significant data found in the results of the study. The instrument assessed a variety of skills and attitudes associated with first grade learning and, therefore, yielded a more comprehensive picture of the level of achievement attained than did the study of language. The results showed that the group of children served by National

Teacher Corps personnel was significantly better prepared for first grade than were their counterparts who did not have the services of this group. It should not be concluded that the NTC group of children will be an immediate success in first grade, or even that all of them will learn to read in first grade. Rather, the results indicate that their chances of continued upward progress in achievement level will be much enhanced by the presence of extra teachers such as National Teacher Corps interns. To place these children in large classes with only one teacher might very well, for some, result in the loss of the gains registered in language.

The self-concept phase of the evaluation is summarized in Table X. The results indicate that the experimental group exhibited a superior self-concept when compared to a similar group which did not have the NTC interns.

Table X

COMPARISON OF THE SELF-CONCEPT SCORES OF THE PUPILS HAVING THE NTC INTERNS WITH A SIMILAR GROUP WHICH DID NOT HAVE THE INTERNS

	$\bar{x}$	s.d.	N.	d.f.	t.
Experimental	108.77	19.97	15	13	--
Comparison	119.34	30.56	15	13	2.43*

* Significant at .05 level

The check list (PSA-K) developed on the basis of the California Test of Personality was constructed so that each item indicated a positive or negative concept along a five point continuum. The statements were stated so that the lowest numerical rating on each item indicated the most positive self-concept.

The computation of the Pearson Product Moment Correlation yielded a value of .41. This represents an acceptable reliability coefficient among the raters so that inferences regarding the group may be made.

In light of the fact that the experimental group showed a significant difference in scores on the check list, confirmation of the NTC program has been achieved. H_5, which states that there would be no significant difference between the experimental and comparison groups on the basis of check list scores, is rejected at the .05 level of confidence. The results of the analysis

indicate that the NTC interns did have a positive impact on the self-concepts of the pupils.

Table XI

COMPARISON OF SCORES ON THE MINNESOTA TEACHER ATTITUDE INVENTORY OF A SAMPLE OF NTC INTERNS WITH A SAMPLE OF TITLE I FIRST YEAR TEACHERS

	$\bar{x}$	s.d.	N.	d.f.	t.
NTC Interns	73.3	26.3	15	13	--
Title I First Year Teachers	65.0	23.1	15	13	.92

Table XII

COMPARISON OF SCORES ON THE MINNESOTA TEACHER ATTITUDE INVENTORY OF A SAMPLE OF NTC INTERNS WITH A SAMPLE OF NON-TITLE I FIRST YEAR TEACHERS

	$\bar{x}$	s.d.	N.	d.f.	t.
NTC Interns	73.3	26.3	15	13	--
Non-Title I First Year Teachers	43.4	27.7	15	13	2.88**

** Significant at .01 level

The National Teacher Corps interns scored significantly higher on the Minnesota Teacher Attitude Inventory ($t = 2.88$) than did non-Title I first year teachers (Table XI). A nonsignificant difference occurred between first year Title I teachers and first year non-Title I teachers (Table XII). This supports the assumption that the NTC interns would exhibit attitudes which are associated with effective teaching more often and to a greater extent than would the non-NTC teachers. On the basis of the results reported (Tables XI and XII) H_6, which states that the NTC interns would not show significantly superior scores on the Minnesota Teacher Attitude Inventory when compared with the non-NTC interns, is rejected. The trend indicates that the NTC program has had positive impact on the attitudes of its interns.

IX. CONCLUSIONS

The global objectives of this study were to assess the effect of the National Teacher Corps Program as it operated in the Atlanta Public School System during the 1966-67 school year. More specifically, the program had a two-fold purpose: (1) to raise the achievement levels of kindergarten children from low socio-economic backgrounds, and (2) to train teachers for service with classes in which the pupils come predominantly from low socio-economic backgrounds. Four areas of investigation were undertaken:

1. Language development,
2. Readiness for the first grade,
3. Self-concept, and
4. Teacher attitudes.

These areas appear to have definite interrelationships, since teacher attitudes affect children and since a child does not ordinarily succeed in school unless he exhibits some positive aspects of the first three items listed above. It was realized by the evaluation committee that meaningful achievement data were more readily available than the attitudinal variety. This does not, though, negate the value of affective material.

One of the more pronounced needs of disadvantaged children is for an improvement in language skills. Several projects were developed that attempted to improve these abilities. It was expected that the children would show significant progress in language abilities, and they did. It is strongly felt that if the time period between pretest and posttest could have been lengthened, even more striking results would have occurred. The trend in the data reveals this quite readily.

Readiness for the first grade has been identified as a function of many of the pupils' characteristics. Among the most important is reading ability. With this fact in mind the research committee assessed the effect that the NTC interns had on readiness for the first grade in terms of reading readiness. The data gathered in the analysis clearly showed that the interns played an important role in helping kindergarten students to become ready for the first grade.

It has been shown that children who have a healthy self-concept achieve more satisfactorily in school than those who have the opposite

viewpoint. Most culturally disadvantaged children enter school with a negative concept of themselves and their environment. The committee deemed it reasonable to expect that the special attention and instruction provided by the NTC interns would effect a change in the self-concepts of the children involved. On the basis of the data gathered and analyses performed, it appears that the NTC interns did indeed improve significantly the self-concepts of the children with whom they worked.

Inherent in any study of attitudes is the difficulty of controlling and manipulating variables. This difficulty, which can be ascribed to the NTC evaluation, does not, though, justify an abandonment of attitudinal investigations. Nor does it imply that meaningful inferences cannot be made from the data, as long as the limitations are fully recognized. The results of this study indicate that the NTC interns do exhibit attitudes that have been associated with nondirective child-centered behavior which, in turn, have been identified with effective teaching in terms of pupil behavior. The inference that can be made is that empirically the relationship does exist.

The results of all the studies undertaken for this evaluation indicate a positive trend, but the committee feels that the program should not be completely judged on the basis of one year of operation. Although each team was to some extent involved in community work, this aspect of the program should be extended. A second year of operation would make these contacts easier. The importance of home-school relationships as a means of building an understanding of what the school is trying to accomplish cannot be overemphasized.

The importance of the early years in development of learning potential was mentioned in the introduction of this report. Each stage in the development of learning potential must be nurtured as it takes place in order for the next stage to follow successfully. The results of the study indicate that National Teacher Corps interns have been able to provide a certain amount of this nurture in the classroom. Further community work should make it possible for parents to have a greater share in the nurturing process and to understand the need for it.

X. IMPLICATIONS

Just as value systems are an integral part of any judgment process, so are implications an inseperable aspect of an evaluation. The concept that "one solution creates two questions" is basic to meaningful research. If automation causes one to re-evaluate his leisure time, this evaluation causes the staff of the Atlanta Public School System to look at the educational program in new perspective. In light of these principles the following implications are noted.

A. For a more completely accurate picture of the value of the National Teacher Corps interns in helping to raise the level of school achievement for disadvantaged pupils, research should, as far as possible, cover the entire presence of pupils in the classroom.

B. It appears that opportunities for small group work and individual help provided by the National Teacher Corps have produced significant gains in the important area of language development. These opportunities need to be continued through the primary grades. Only in this way can sequential progress toward a higher level of school achievement be maintained for these children.

C. The Illinois Test of Psycholinguistic Abilities may have implications for assessing language skills of National Teacher Corps classes in future years. The subtests give a rather comprehensive picture of the child's language. It has been used successfully for clinical diagnosis of reading disabilities related to language development and acted upon as a basis for suggesting remedial programs.

D. A longitudinal study of the children who have been served by National Teacher Corps interns would be of considerable value in assessing the worth of the program. Only by means of such a study can the value of the program be completely assessed. For continued progress and to hold the gains already evident, this program, or one similar to it, should be provided for the children through the primary grades. In his book, Stability and Change in Human Characteristics, Bloom has stated that the data assembled by him and his associates suggest that, "in terms of intelligence measured at age 17, about fifty per cent of the development takes place between ages four and eight." This

emphasizes the need for programs like the National Teacher Corps to be extended through the primary grades.

E. The possibility exists that the study should be replicated on a larger basis. The "t" distribution is leptokurtic when the sample size is small but approaches normality as the size increases.

F. The evaluation points out need for continued efforts to identify the variables involved in the teacher-learner dyad so that an empirical examination can be made. Further efforts should be made to clarify variables, such as the self-concept, by the establishment of more acceptable validity and reliability coefficients.

G. Continued efforts should be made in future evaluations to refine some of the instruments used. This has particular implications for the use of rating instruments.

H. This study has created the need to investigate whether high performance on the Minnesota Teacher Attitude Inventory relates to more effective performance in a teaching situation.

I. The measurable effects that the NTC has had on pupil behavior on a longitudinal basis is definitely implied from this study. Those measured might be in terms of:

1. Attendance,
2. Achievement, and
3. Attrition.

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XII. APPENDIX

INSTRUCTIONS FOR ADMINISTERING THE PSA-K CHECK LIST

This is a check list for assessing the Personal and Social Adjustment of the kindergarten child in the school situation. The check list has 49 items, each of which describes a behavior. Beside each item there are five spaces for checking your observation of the described behavior. You are asked to place a check mark (X or ✓) in the one column which best describes your observation of each of the 49 items. The choices listed at the top of each column are "Always," "Most of the Time," "Sometimes," "Seldom," and "Never." A description of the categories of behavior found in the check list is provided.

The following procedures should be adhered to in using the check list:

1. Read the descriptions of categories and the complete check list before using.

2. In judging each item consider the behavior of the child over a period of two weeks.

3. Be as objective as possible in your judgment.

4. Do not consult with others about the child's behavior.

5. Be sure to check every item on the list. If in doubt about an item make the best judgment you can.

6. The check list should not be marked in the presence of the child.

DESCRIPTION OF CATEGORIES

PERSONAL ADJUSTMENT

1.A. Self-Reliance

The self-reliant five-year-old can put on his own coat and hat and usually his boots (unless they are too small for his shoes). He can usually tie his own shoes. He does not cry easily. He finds it easy to tell the class about things he has done or places he has been. He can usually find something to do without help. He appears to have many friends.

1.B. Sense of Personal Worth

A five-year-old indicates a sense of personal worth by the assurance with which he follows directions. He is confident of success and not easily discouraged if success is delayed. Other children like and accept him in their work and play activities. He contributes ideas to the group usually without fear of making a mistake.

1.C. Feeling of Belonging

A five-year-old, who feels he belongs, is friendly toward the other children, toward his teacher, and toward people in general. When he seeks other children to share an activity, he is not often rejected by them. He likes to come to school.

1.D. Withdrawing Tendencies

This is the child who seems to live in a dream world. He may cry easily, play alone, watch others rather than participate. He often seems not to hear what you say to him. The normal child is usually free of these tendencies.

1.E. Nervous Symptoms

The nervous symptoms of the five-year-old may involve thumb or finger sucking, hair pulling or twisting, soiling of clothes, inability to relax or to sit still even for a few minutes. He may seem tired when he comes to school or be absent frequently due to minor illness.

SOCIAL ADJUSTMENT

2.A. Social Standards

The well adjusted five-year old can accept the fact that he must take turns with his classmates, that he must sometimes listen to other people, or play the game that others want to play. He has a pretty good sense of what is right and what is wrong.

2.B. Social Skills

A five-year-old may enjoy helping others or comforting another child who is crying. He shows an interest in those around him and in what they are doing. He may make complimentary remarks about another child or the work of another child.

2.C. Anti-Social Tendencies

In a five-year-old, these anti-social tendencies may include fighting, kicking, or biting others. He may be disobedient and may frequently quarrel with other children. He may seek attention in ways that are harmful to others, and may be distructive of other people's property. The normal five-year-old if relatively free of these tendencies.

2.D. School Relations

The normal five-year-old likes to come to school, likes his teacher, and enjoys being with the other children. He is eager and willing to participate in most class activities and evidently enjoys taking his turn as a "helper."

PSA-K

(PERSONAL--SOCIAL ADJUSTMENT FOR KINDERGARTEN)

	Always	Most of the Time	Sometimes	Seldom	Never
1. This child enters the classroom without hesitation	☐	☐	☐	☐	☐
2. This child complains to you when other children refuse to let him play	☐	☐	☐	☐	☐
3. This child follows directions well, e.g., attempting a new activity	☐	☐	☐	☐	☐
4. This child enters the classroom with a smile and quickly finds something to do	☐	☐	☐	☐	☐
5. This child cries easily or appears to be near tears	☐	☐	☐	☐	☐
6. This child likes to help new children who enter the class	☐	☐	☐	☐	☐
7. This child fights when he cannot have his way	☐	☐	☐	☐	☐
8. This child tells you that other children take his things	☐	☐	☐	☐	☐
9. This child becomes angry with other children	☐	☐	☐	☐	☐
10. This child disobeys	☐	☐	☐	☐	☐
11. This child tells you the other children won't play with him	☐	☐	☐	☐	☐
12. This child pushes, hits, kicks or bites other children	☐	☐	☐	☐	☐
13. This child shares things with other children, e.g., respects a time limit for riding a tricycle, or using a coveted doll or wheel toy . . .	☐	☐	☐	☐	☐
14. This child exhibits nervous habits, such as thumb or finger sucking, nail biting, hair pulling or twisting, clothes soiling, etc.	☐	☐	☐	☐	☐

	Always	Most of the Time	Sometimes	Seldom	Never
15. This child prefers to watch others rather than participate in class activities	☐	☐	☐	☐	☐
16. This child is confident of success	☐	☐	☐	☐	☐
17. This child eats well without encouragement and help	☐	☐	☐	☐	☐
18. This child appears to have fun with other children at school	☐	☐	☐	☐	☐
19. This child is welcomed when he seeks to join in the play of other children. .	☐	☐	☐	☐	☐
20. This child finds it easy to talk in front of the class	☐	☐	☐	☐	☐
21. This child makes friends easily	☐	☐	☐	☐	☐
22. This child is heard to say, "I don't like school."	☐	☐	☐	☐	☐
23. This child appears tired when he comes to school	☐	☐	☐	☐	☐
24. This child avoids talking to people who are strange to him	☐	☐	☐	☐	☐
25. This child is able to distinguish between what belongs to him and what belongs to others	☐	☐	☐	☐	☐
26. This child tells you that another child has said something unkind about him . .	☐	☐	☐	☐	☐
27. This child resorts to temper tantrums to try to get his way	☐	☐	☐	☐	☐
28. This child seems to enjoy pushing and scaring other children	☐	☐	☐	☐	☐
29. This child regards adults with suspicion or open hostility	☐	☐	☐	☐	☐
30. This child does his part when it is time to put materials away	☐	☐	☐	☐	☐

	Always	Most of the Time	Sometimes	Seldom	Never
31. This child enters into games even if it is one he says he does not like to play	☐	☐	☐	☐	☐
32. This child is subject to outbursts of anger with seemingly little justification	☐	☐	☐	☐	☐
33. This child is eager to try new materials or activities	☐	☐	☐	☐	☐
34. This child is upset when he makes a mistake	☐	☐	☐	☐	☐
35. This child initiates activities for himself and others on the playground and during free play	☐	☐	☐	☐	☐
3 This child permits other children to take things away from him without protesting	☐	☐	☐	☐	☐
37. This child watches other children play rather than joining the group	☐	☐	☐	☐	☐
38. This child is left out of things when he is with the group	☐	☐	☐	☐	☐
39. This child cries easily when slightly hurt or frustrated	☐	☐	☐	☐	☐
40. This child is sought out by the other children during work and play	☐	☐	☐	☐	☐
41. This child is heard to say to a child or to the teacher, "I like you," or "You're my friend."	☐	☐	☐	☐	☐
42. This child is absent from school frequently because of minor illnesses . .	☐	☐	☐	☐	☐
43. This child makes complimentary remarks about other children or their work	☐	☐	☐	☐	☐
44. This child can wait his turn--on the swings, slide, or when playing games	☐	☐	☐	☐	☐
45. This child fails to make a choice of activity during "free play"	☐	☐	☐	☐	☐

	Always	Most of the Time	Sometimes	Seldom	Never
46. This child seems over-sensitive to correction	☐	☐	☐	☐	☐
47. This child breaks or destroys things in anger, e.g., his own or someone else's drawing	☐	☐	☐	☐	☐
48. This child needs help in putting on coat, hat, and tying shoes	☐	☐	☐	☐	☐
49. This child contributes ideas freely . .	☐	☐	☐	☐	☐

THE END

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