

**ATTITUDE CHANGE AS A FUNCTION OF DIFFERENTIAL
STUDENT TEACHING PLACEMENT**

**Thesis for the Degree of Ph. D.
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Attitude Change as a Function of
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ABSTRACT

ATTITUDE CHANGE AS A FUNCTION OF DIFFERENTIAL STUDENT TEACHING PLACEMENT

by Albert R. Elwell

This investigation's goal was to assess changes in the attitudes of white female elementary education student teachers as a function of their placement in classrooms in which the pupils were culturally different from themselves.

An analysis of the purposive function of the student teaching experience served as the basis for the selection of three central concepts related to the experience: CHILDREN, ACADEMIC PREPARATION, and SELF. The student teaching experience is essentially one involving a challenge to previously established patterns of self-social systems interaction. The reassessment required by the new experience was assumed to involve three dimensions which are similar to Osgood's principal meaning factors and suggested the employment of the semantic differential in an attempt to assess changes in attitudes.

It was hypothesized that a general attitude change should occur as a result of the discrepancy between the student's initial expectations and subsequent perceptions as he moved from the teacher preparation institution to the student teaching classroom. Differential attitude change was predicted as a function of the racial composition and socio-economic characteristics of the student teaching classroom, with greater change predicted for student teachers assigned to pupils with backgrounds culturally different from their own. It was also hypothesized that contact with one rather than another student teaching environment should result

disparity between expectations and subsequent perceptions of elementary school children was reflected in terms of the "potency" (in Osgood's sense) of the children and this was true regardless of placement. The directional analysis of movement toward the "alienation poles" over all 13 scales indicated that student teachers tended to become "most alienated" on the sub-concept of CHILDREN most closely associated with their placement.

ACADEMIC PREPARATION. The chief result of the analyses of the concept ACADEMIC PREPARATION was the indications of stability in the student teacher attitudes regardless of placement. Moreover, such movement as did occur on the sub-concepts were toward the "non-alienation" rather than the predicted "alienation" poles.

SELF. The results of the analyses for concept SELF also showed stability in student teachers' attitudes regardless of placement. Although differential tests of attitude change were not statistically reliable, there appeared to have been some tendency for greater change toward concept of SELF for the students in culturally different placements than for the culturally similar group. Most of the directional alienation hypotheses were rejected, but the student teachers in both placements moved toward greater alienation in their perceptions of SELF AS TEACHER, as predicted.

The results lent general support to the rationale of the study. The effect of the time interval between testings, the difficulties in interpreting the semantic data, sampling and placement classification problems encountered were discussed followed by suggestions for developing a more precise and complete test of the rationale.

in a differential attitude change on related sub-concepts: PUPIL and NEGRO PUPIL; GENERAL ACADEMIC PREPARATION and PROFESSIONAL ACADEMIC PREPARATION; and SELF AS STUDENT and SELF AS TEACHER.

The instrument employed was the standard 50 x 2 semantic differential bipolar scales paired with the six sub-concepts. Identical forms were administered immediately prior to the student's first contact with the school and following completion of one-half of the ten-week experience.

The sample consisted of 51 Michigan State University white female elementary education majors assigned kindergarten through grade six student teaching placements in schools located in seven metropolitan cities in Michigan.

Dichotomization of student teaching placements was accomplished on criteria of racial composition and socio-economic rating of the school. Twenty-one placements were judged culturally different and 30 classified culturally similar.

Factor analytic procedures resulted in the selection of 13 representative bipolar scales for employment in the final analyses. Analyses of individual scale stability over the time dimension and across placements for each sub-concept utilized the t-test. The sign test was employed to assess movement toward the "alienation pole" - over the 13 scales as a set - by and between placement groups for each sub-concept and pairs of related sub-concepts.

CHILDREN. Attitude changes within and between placement types were found, in general, not to be statistically reliable when examined on an individual scale basis. Although the number of scales for which reliable differences were found did not permit a definitive interpretation of the meaning of such shifts as did occur, the results suggested that the greatest

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Albert Roland Elwell

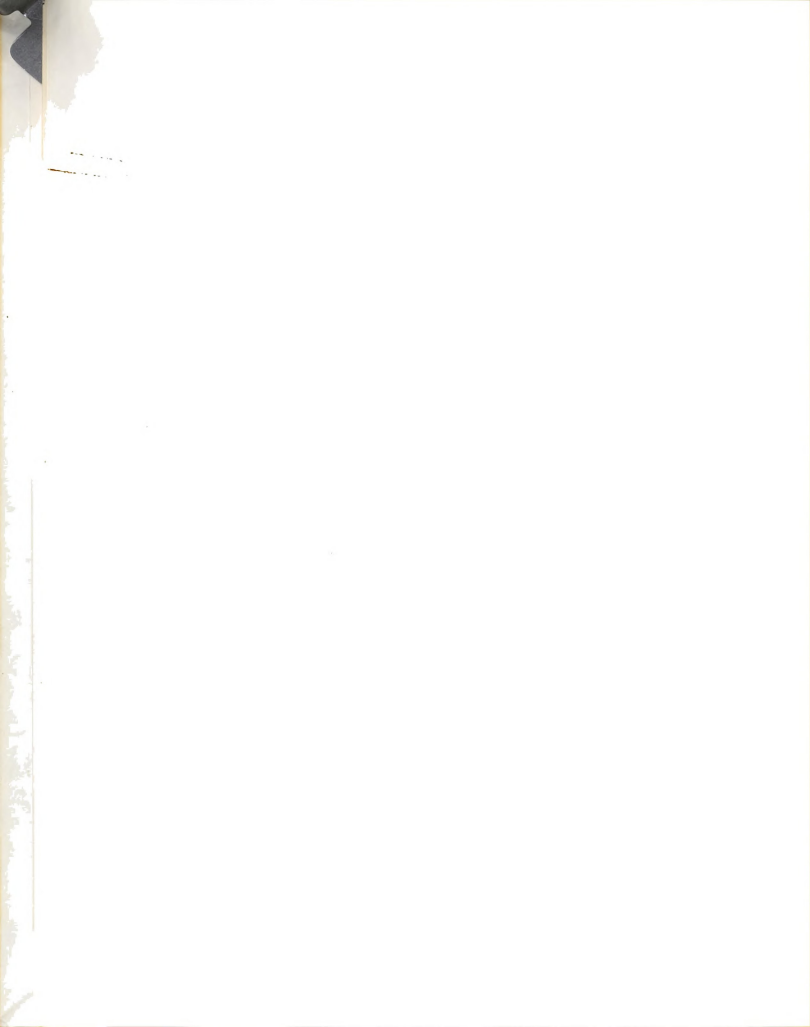
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DEDICATION

To Lin and Sherrie:

Perhaps now we may become a family.

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I would like to express my appreciation to the doctoral committee - Drs. Bernard R. Corman (Chairman), William W. Farquhar, David Gottlieb, and Walter R. Stellwagen - for their guidance during the doctoral program.

I am grateful for the time, cooperation, and encouragement offered by the entire staff - faculty, graduate assistants, and secretarial staff alike - of the Michigan State University, College of Education, Office of Student Teaching and its student teaching cooperating centers.

I am especially grateful for the support, encouragement, and services extended by my typist, Lorna Banks, during the entire doctoral program.

Finally, no words could express the extent of my appreciation for the many roles and deeds performed by Dr. Thomas Telder and his entire family.

As a footnote, I wish to express my gratitude to all members of the Student Teacher Education Program teams, from directors to secretarial staffs, and especially Dr. Bernard R. Corman, for granting to me the opportunity to participate in many meaningful relationships and experiences as a member of the team.

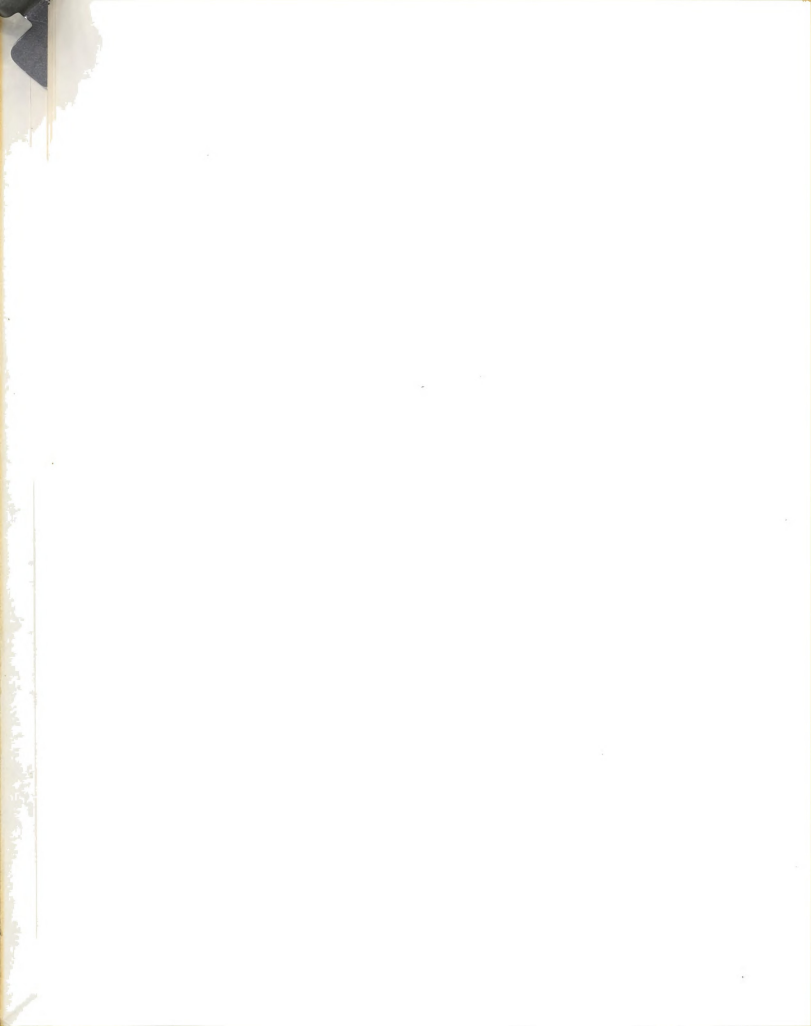


TABLE OF CONTENTS

	Page
DEDICATION	ii
ACKNOWLEDGMENTS	iii
Chapter	
I. INTRODUCTION	1
II. RATIONALE OF STUDY	3
The Induction Into Teaching	
The Significance of the Student Teaching	
Experience in Producing General Attitude	
Change	
The Significance of the Student Teaching	
Placement in Producing Attitude Change	
Summary: Rationale of the Study	
III. PROCEDURE	18
The Instrument	
Description of the Sample	
Classification of Student Teaching	
Placements	
Preliminary Data Analyses	
Rationale of the Statistical Methodology	
Research Hypotheses	
IV. RESULTS	28
Selection of Descriptive Bipolar	
Adjective Scales	
Changes in the Concept of CHILDREN	
Changes in the Sub-Concept of PUPIL	
Changes in the Sub-Concept of NEGRO	
PUPIL	
Differential Change in Sub-Concepts	
PUPIL and NEGRO PUPIL by Placements	
Discussion of Results - Concept CHILDREN	
Changes in the Concept of ACADEMIC	
PREPARATION	

TABLE OF CONTENTS--(Continued)

Chapter	Page
Changes in the Sub-Concept of GENERAL ACADEMIC PREPARATION	
Changes in the Sub-Concept of PROFESSIONAL ACADEMIC PREPARATION	
Discussion of Results - Concept ACADEMIC PREPARATION	
Changes in the Concept of SELF	
Changes in the Sub-Concept of SELF AS STUDENT	
Changes in the Sub-Concept of SELF AS TEACHER	
Changes in the Sub-Concepts SELF AS STUDENT and SELF AS TEACHER by Place- ments	
Discussion of Results - Concept SELF	
V. SUMMARY, CONCLUSIONS, AND IMPLICATIONS	56
Summary and Discussion of Results	
Implications	
BIBLIOGRAPHY	63
APPENDIX A	65
APPENDIX B	67
APPENDIX C	69
APPENDIX D	77
APPENDIX E	84

LIST OF TABLES

Table		Page
I.	Reasons for Rejection of Subjects from Study	20
II.	Classification of Student Teaching Placements by Racial Composition and Socio-Economic Rating Data	22
III.	Number of Factors Required to Meet Criterion and Per Cent of Total Variance - By Sub- Concept and Test Administration	28
IV.	Pre- and Post-Attitude Scale Means and Mean Difference for Sub-Concept PUPIL by Place- ment Group	31
V.	Direction of Mean Difference Score Movement on Sub-Concept PUPIL	32
VI.	Pre- and Post-Attitude Scale Means and Mean Difference for Sub-Concept NEGRO PUPIL by Placement Group	34
VII.	Direction of Mean Difference Score Movement on Sub-Concept NEGRO PUPIL	35
VIII.	Sub-Concept Toward Which Placement Group Became Most Alienated: Sub-Concepts PUPIL x NEGRO PUPIL	37
IX.	Pre- and Post-Attitude Scale Means and Mean Difference for Sub-Concept GENERAL ACADEMIC PREPARATION by Placement Group.	40
X.	Direction of Mean Difference Score Movement on Sub-Concept GENERAL ACADEMIC PREPARATION	42
XI.	Pre- and Post-Attitude Scale Means and Mean Difference for Sub-Concept PROFESSIONAL ACADEMIC PREPARATION by Placement Group	43
XII.	Direction of Mean Difference Score Movement on Sub-Concept PROFESSIONAL ACADEMIC PREPARATION	44



LIST OF TABLES--(Continued)

Table		Page
XIII.	Sub-Concepts Toward Which Placement Group Became Most Alienated: Sub-Concepts GENERAL ACADEMIC PREPARATION x PRO- FESSIONAL ACADEMIC PREPARATION	46
XIV.	Pre- and Post-Attitude Scale Means and Mean Difference for Sub-Concept SELF AS STUDENT by Placement Group	48
XV.	Direction of Mean Difference Score Movement on Sub-Concept SELF AS STUDENT	50
XVI.	Pre- and Post-Attitude Scale Means and Mean Difference for Sub-Concept SELF AS TEACHER by Placement Group	51
XVII.	Direction of Mean Difference Score Movement on Sub-Concept SELF AS TEACHER	52
XVIII.	Sub-Concepts Toward Which Placement Group Became Most Alienated: Sub-Concepts SELF AS STUDENT x SELF AS TEACHER	53



LIST OF APPENDICES

Appendix	Page
A. Preliminary Questionnaire to Student Teaching Cooperating Center Coordinators Concerning Availability of Student Teaching Placements and Other Related Information for Spring Term 1964	65
B. Final Questionnaire to Student Teaching Coopera- ting Center Coordinators Concerning Racial Composition and Socio-Economic Characteristics Data	67
C. Instrument Format and Administrative Directions	69
D. Pre-Post Test Quartimax Factor Loadings for N Factors, 13 Bipolar Scales, on Each of Six Sub-Concepts (Tables D-1 - D-6)	77
E. Pre and Post Attitude Score and Difference Score Means and Standard Deviations by Sub-Concepts and Placement Group for 13 Bipolar Scales (Tables E-1 - E-13)	84



CHAPTER I

INTRODUCTION

This investigation's purpose is to assess change in the attitudes of white female elementary education student teachers as a function of their placement in culturally different schools.

All people, regardless of their position in a society, possess certain expectations of the societal groups and institutions with whom they associate.¹ A prospective teacher's expectations of the public elementary school and his perceptions following contact with the school will either be in dissonance or in relative consonance. If the two perceptive systems are in consonance, the transition from the teacher preparation institution to the public elementary school may not result in significant attitude conflict during the induction. If, however, the perceptive systems are in dissonance, such dissonance may prompt behavior aimed at reducing the degree of conflict, including as one possible course of action, attitude change toward groups and institutions.

Investigations concerning the period and rate of attitude change as a result of the student teaching experience have not firmly established the existence of systems conflict and of a resulting dissonance.² The literature appears ambiguous on the magnitude of attitude alteration. An imme-

¹ Festinger, L. A Theory of Cognitive Dissonance. Evanston, Ill.: Row, Peterson, 1957.

² Charters, W.W. in Gage, N.L. (ed.) Handbook of Research On Teaching. Chicago, Ill.: Rand, McNally, 1963, pp. 749-752.



diate change of highly significant magnitude may not occur at a sufficient rate during the induction period to permit interpretation. But an assessment of directional movement toward alienation from groups and institutions may be exhibited during the induction. Thus, a major hypothesis of this study concerns the direction and magnitude of student teacher movement toward attitude alienation as a function of the student teaching experience.

It was assumed that a principal source of attitude change for a student teacher would be the racial composition and socio-economic characteristics of the public elementary school placement. Since the cultural and experiential background of student teachers enrolled in state-supported teacher education institutions is predominantly middle class,³ the prospective teacher may experience greater attitude change as a function of his placement in a school culturally different from those he has experienced. Although we assume that all prospective teachers' expectations and their perceptions of the public elementary school will be in dissonance to some extent, the basic hypothesis of this study suggested differential degrees of conflict and resulting attitude change as a function of the racial composition and socio-economic characteristics of the student teaching placement.

³Gottlieb, D. Teaching and Students: The Views of Negro and White Teachers. (Unpublished Paper, Michigan State University, August 1963.



CHAPTER II

RATIONALE OF STUDY

The Induction Into Teaching

In general, the student teaching phase of a teacher education program is designed to give prospective teachers an opportunity to examine their attitudes, expectations, and practices with regard to the many roles of the teacher. This functional purpose can best be illustrated by selected passages from a Michigan State University, College of Education bulletin entitled, A Description of Michigan State's Full-Time Student Teaching

Program:⁴

One of the most important advantages of the resident program is that students can see first-hand and have a part in the development of a continuous teaching program for pupils. They can observe from a good vantage-ground how different phases of the curriculum are related, what kinds of emphases are important in a sequential program of teaching, and the inter-relationships of one classroom to the total program of the school

. . . .

Student teachers get to know their pupils better by being with the group a longer time. They study the backgrounds of their pupils, they have more time for understanding and helping to diagnose difficulties in children, and they are able to offer more effective guidance and counseling since they are with their groups full-time during the term

Problems of teaching and methods of solution become immediately more realistic as the student teacher tackles problems in a real public school setting

⁴ A Description of Michigan State's Full-Time Student Teaching Program. Michigan State University, College of Education, Office of Student Teaching, September 1963.



He finds out, by living the life of a teacher, just what the job of a teacher is.

In his paper, Operational Competence in Student Teaching, Rex assumes "that all of the knowledge, techniques, and skills related to the teaching function are provided to some degree prior to the student teaching experience." The individual, group, and institutional experiences are taken into the student teaching experience where "a life-like, on-the-job experience . . . is considered an ideal laboratory for observation of performance which will reveal the attitudes, the skills, the natural and the learned traits which are considered essential in the makeup of a good teacher."⁵ Thus, past experiences of a student preparing to teach, and especially the formal academic preparation in the teacher training institution, are subjected to a new experience - student teaching. The student teaching experience provides the realistic environment where the applicability of previously acquired expectations and formal preparation are assessed in light of the student's perceptions of the public school experience.

Rex's formulation of the "internship experience" provides a definition of the purposive function of the experience:⁶

The purpose of the internship experience appears to be that of providing for the neophyte an opportunity to experience the fusion of principles and theories appropriate to the profession as they are applied in the solution of practical problems. The internship experience is, additionally, intended to bring the trainee into contact with the practicing professionals in a

⁵Rex, R.G. Operational Competence in Student Teaching. (Unpublished Paper, Michigan State University, 1962).

⁶Rex, R.G. "A Theory of Internship in Professional Practice." Dissertation Series. East Lansing, Mich.: Michigan State University Press, 1964.

field setting, and with the clientele with whom professional services are extended. It provides an exposure to the range of problems and conditions normally experienced in professional field practice.

On the basis of the above definition three major concepts can be identified on which assessment of the student teaching experience might occur, namely:

(1) CHILDREN - expectations and perceptions of what school children are like; (2) ACADEMIC PREPARATION - judgments of the worth of the knowledge and skills acquired through formal preparation programs; and (3) SELF - assessment of expectations as a college student and as a classroom teacher.

Waisanen, in his analysis of self-social system interactions, identified three dimensions which would be involved in the process of assessment as an individual moved from one situation to another, or from one group to another - namely, Sentiment, Familiarity, and Power.⁷ The first dimension - Sentiment - involves an individual's assessment of his affective ties with other members of the social system. As applied to the student teaching experience, sentiment would concern the prospective teacher's assessment of the CHILDREN in his classroom. Second, the dimension of Familiarity involves the assessment of one's ability to manipulate facilities. One equivalent in the student teaching experience would be the student's concept of his ACADEMIC PREPARATION as it is applied to the student teaching experience. The third dimension - Power - refers to the perceived significance and productivity of one's self in relation to the larger social system and represents the individual's SELF-reassessment as the individual moves from the teacher preparation institution to the classroom.

The dimensions of Sentiment, Familiarity, and Power equate with the principal factors in Osgood's semantic differential - Evaluation, Activity,

⁷ Waisanen, F.B. "Stability, Alienation, and Change." The Sociological Quarterly. 1963, IV: 18-31.



and Power, respectively - and suggest the use of the semantic bipolar adjectives scales in an attempt to study changes in concepts that might occur as the student teacher moves into the new experience.⁸

The Significance of the Student Teaching Experience
in Producing General Attitude Change

As an extension of the Festinger theory of cognitive dissonance, Waisanen suggests that in the interaction of the self-social systems notable pressures toward mutual stability are exerted, and that as individuals perceive less than a full measure of goal-achievement, pressures toward change may be exerted.⁹ Waisanen notes that where dissonance occurs, one response to reduce the condition is to change one's attitude thereby reducing the dissonance. Additionally, Waisanen notes that a person in conflict has three alternatives: (a) he can retreat from either his self system or his social system; (b) he can attempt to change either system; or (c) he can resign to goallessness.

A prospective teacher's expectations of the public elementary school and his perceptions following contact with the new experience will either be, in Festinger's terminology, in dissonance or in relative consonance. If the two perceptive systems are in consonance, the transition from the teacher preparation institution to the public elementary school should not result in significant attitude conflict during the induction. If, however, the perceptive systems are in dissonance, such dissonance should prompt behavior aimed at reducing the degree of conflict and achieving a new stability. The

⁸Osgood, C.E., Suci, G.J., and Tannenbaum, P.H. The Measurement of Meaning. Urbana, Ill.: University of Illinois Press, 1957.

⁹Waisanen, F.B. op. cit.

student teacher who perceives conflict in goal-achievement as a result of self-social systems' instability has three alternatives: retreat, change, or goallessness. Although it is possible to retreat from the conflict through withdrawal from the student teaching experience, this course of action is unlikely since the student has a commitment to the required experience in order to gain full certification as a teacher. Goallessness is not probable since such behavior will not likely be tolerated by the teacher preparation institution; the student teacher is not free to resort to this course of action. The student in conflict normally has but one alternative at his disposal, that of changing either his attitudes or the institutional system. Since the student teacher is but a trainee, it is unlikely that he either could or would exert sufficient pressures to change the social system of the school. Although the long-term goal of the student teaching experience is to establish stability in self-social systems interactions, as Becker points out, "outsiders are systematically prevented from exerting any authority over the institution's operations because they are not involved in the web of control and would be destructive to the [established] institutional organization."¹⁰ Since the student teacher is an "outsider" to the organizational structure of the school, the student is expected to conform to the institutional norms and sanctions aimed at producing desired changes in his behavior. Such changes should be observable as the prospective teacher's expectations are altered following contact with the school. Specifically, if attitude change occurs it should be reflected in different assessments of such concepts as CHILDREN, ACADEMIC PREPARATION, and SELF.

¹⁰Becker, H.S. "The Teacher in the Authority System of the Public School." in Etzioni, A. (ed.) Complex Organizations. New York: Holt, Rinehart, and Winston, 1961, pp. 243-251.



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It thus seems likely that all prospective teachers' initial expectations and their subsequent perceptions of the public elementary school will be in dissonance to some extent. An argument in support of this proposition of a general attitude change is noted in Shaplin's article entitled, "Practice in Teaching:"¹¹

Teaching is behavior, and as behavior is subject to analysis, change, and improvement. The purpose of practice, as with all aspects in the training of teachers, is to take the novice where he is [at induction] and work toward improved teacher behavior

Much of the habitual behavior which individuals have developed in other contexts is inappropriate for the teaching situation, since most individuals have developed consistent ways of behavior in a variety of roles, such as a member of the family, as students

Basic attitudes and orientations toward people developed in these contexts are frequently in direct conflict with the specialized role expectations to be developed in teaching

The assumption is made that practice conditions . . . provide the kind of analysis of teaching which will enable the [student] teacher to learn to control his behavior.

A similar point is made by Charters when he states that "the teacher's participation in the system of social relationships which comprise the student teaching experience are of particular significance in that these relationships shape the teacher's role conceptions and his attitudes and values concerning himself, his colleagues, his clients, and the teaching-learning process."¹²

The system of social relationships in the background of the prospective teacher is likely to be quite different from that found in the student teaching experience. Grambs noted that "although teaching is one of the

¹¹Shaplin, J.T. "Practice in Teaching." The Harvard Educational Review, Winter 1961, XXXI: 33-59.

¹²Charters, W.W. op. cit.



few occupations to which all youngsters in our society are intimately and persistently exposed, the nature of that exposure is peculiarly biased. Group sanctions prohibit the future teacher from trying out the role and even from associating too closely with teachers."¹³ Moreover, Miller found that role-awareness was less well developed in teacher preparation than in other professions.¹⁴ Thus, the student teaching experience provides the teacher trainee with his first extended opportunity to examine the applicability of previously formed attitudes about teaching. And, as has been suggested, if the conceptual expectations of the student teacher are not in accord with his perceptions once he enters into the school, then he must change his attitudes.

There is also some authority for expecting a change in the attitudes of student teachers toward the specific concept of CHILDREN. Stratemeyer and Lindsey suggest, in their supervising teacher handbook Working with Student Teachers, that supervising teachers should not assume that because the student has had previous contact with children and youth he is well on the road to a complete understanding of them. Stratemeyer and Lindsey state that student teachers can be expected to lack some degree of understanding in the areas of individual differences, development and learning behavior of children in the schools. "Student teachers, too, learn by experience to understand children and to assess the particular needs of their pupils . . . you cannot assume that all students have the ability to generalize. In fact one of your main concerns would be helping the student in the generalization

¹³Grambs, J.D. "The Sociology of the 'Born' Teacher." Journal of Educational Sociology, 1952, XXV: 532-541.

¹⁴Miller, H. "Role Awareness as an Objective of Group Work in Teacher Education." Journal of Teacher Education, 1955, VI: 128-133.

process as he reflects on data about learners."¹⁵ Shaplin adds that "of particular importance . . . is the elimination of the type of dualistic 'either-or' thinking [about pupils] and the moralistic categorization of behavior so common to teachers. Implied here is the constant use of such words as 'good', 'bad', 'lazy', 'bright', 'stupid', etc. and of oppositional terms such as authoritarian-democratic. We must realize that the teacher may have a distorted or incomplete image."¹⁶

A general attitude change toward ACADEMIC PREPARATION may also be expected among novice teachers. According to Shaplin, the applicability of knowledge and information acquired during formal preparation "is assumed to be at their command, [but they] find to their distress that the words, ideas, and information do not respond to command so readily" in the student teaching environment.¹⁷

Finally, attitude change toward concept of SELF may be expected as the prospective teacher moves from the preparation institution to the public school classroom. Warren has proposed that the transition from college student to teacher entails a drastic role reversal for the individuals involved: "from the rights and duties of the student to the reciprocal rights and duties of the teacher; from free and easy sociality to a position of isolation; from personal freedom to control; from a liberal to a conservative environment; and from semi-anonymity and limited responsibility to a

¹⁵Stratemeyer, F.B., and Lindsey, M. Working with Student Teachers. New York: Bureau of Publications, Teachers College, Columbia University, 1961.

¹⁶Shaplin, J.T. op. cit.

¹⁷Ibid.

highly visible position as a responsible adult in the community."¹⁸ Warren raises the theoretical issue of role discontinuity and psychological conflict as the student engages in the induction process. Shaplin notes that in the student teaching experience,¹⁹

A conscious effort should be made to provide opportunities for self-evaluation, to establish a persistent mood of self-criticism, and to train teachers in self-evaluation. One way to approach this problem is to think of a teaching sequence as an experimental trial: objectives are set, material is selected as a vehicle for accomplishing the objectives, methods of instruction adapted to the material are applied, and ways of evaluating the learning of students are devised. The trial is run, and expectations at each point of the sequence are checked against what actually happens as observed by the student teacher himself. During the practice period, the teacher's observations can be checked against the observations of the supervisor. The contrast of observed images of the teaching sequence provides the basis for learning to be self-observant and self-critical.

In summary, some degree of attitude conflict is expected of student teachers during the course of their induction into the profession. Such conflict reflects the discrepancy between the student's expectations and subsequent perceptions. The resolution of the conflict will result in some alteration in a student teacher's concepts of CHILDREN, ACADEMIC PREPARATION and SELF, since other behavioral responses are foreclosed.

The Significance of the Student Teaching Placement in Producing Attitude Change

While some attitude change can be expected in all student teachers, the extent of change may be influenced by any factor which would tend to maximize the probable dissonance. The cultural and experiential background of student teachers enrolled in state-supported teacher education institutions

¹⁸ Charters, W.W. op. cit. (From Notes on Unpublished Manuscript by Warren, R.L., ca. 1949, Ch. VI).

¹⁹ Shaplin, J.T. op. cit.

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¹⁹Shaplin, J.T. op. cit.

is predominantly middle class. The probability of attitude change, therefore, should be greater for those students placed in schools culturally different from those they are most likely to have encountered at their own experience.

The problem of presenting an accurate image of the public elementary school pupil, the debate over the adequacy and applicability of academic preparation acquired prior to the student teaching experience, and the concern with the transition from the roles of the student to the roles of the classroom teacher with respect to culturally different school situations have recently been of concern to the teacher preparation institutions, public school officials, and other educators and laymen. Charters states that "role learning and attitude change over a time dimension as a function of the student teaching placement characteristics are now being recognized as important factors underlying both the purposes and consequences of the student teaching experience."¹⁹ The cultural and experiential backgrounds of prospective elementary school students are of importance since, as Becker points out, "although the available teaching positions in city schools are similar in formal characteristics, they differ widely in terms of the configuration of the occupation's basic work problems which they present." Becker states that the greatest problems of work are found in the lower-class schools and, consequently, most teacher movement in the system is a result of teacher dissatisfactions with the social-class composition of these school populations. "The above problems are important because in most large school systems the new teacher typically begins his career in the least desirable kind of school."²⁰ Wagenschien reported that teachers feel

¹⁹ Charters, W.W. op. cit.

²⁰ Becker, H.S. "The Career of the Schoolteacher." in Nosow, S., and Form, W.H. (eds.) Man, Work, and Society. New York: Basic Books, 1962, pp. 321-329.

that the form and degree of problems vary considerably with the social class background of the students [children] and, additionally, that the most difficult problems arise from interactions with children.²¹ In a related study, Groff found that "problems of discipline or negative behavior, too large classes, and lack of understanding and acceptance of children by teachers" were the principal reasons for teacher dissatisfaction and turnover.²² Gottlieb has noted that "the individual whose own experiences included being a part of a middle class culture . . . would no doubt experience the greater feeling of 'cultural shock' when placed in the setting of the inner-city school. When the individual's expectations, based on personal experiences, are not off-set or modified by what is taught to potential teachers in schools of education, there is little reason to believe that the individual will be realistic in his expectations."²³

The research cited above seems to indicate that the greater the disparity between the cultural background of the prospective teacher and the student teaching placement, the more the student teacher's attitude would be changed in relation to such concepts as CHILDREN, ACADEMIC PREPARATION, and SELF. Thus, in general, we would predict even greater attitude change among those student teachers assigned to culturally different rather than culturally similar placements.

²¹Wagenschien, M. "Reality Shock:" A Study of Beginning Elementary School Teachers. (Unpublished Thesis, University of Chicago, 1950).

²²Groff, P.J. "Dissatisfactions in Teaching the CD Child." Phi Delta Kappan, November 1963, XLV: 76.

²³Gottlieb, D. op. cit.

Although most investigations of teacher-pupil interactions in the public school classroom are presented without specification of the racial composition of the pupil enrollment, some studies have focused specifically on differential teacher interactions with Negro pupils. Gottlieb studied the relationship between the teachers' own race and their perceptions of Negro pupils. He found that race and socio-economic characteristics of the pupil do, in fact, play some part in how teachers react to Negro children.²⁴ Groff found that 40 per cent of the 294 teachers interviewed in culturally different schools pointed to "peculiarities in the personalities of culturally different children" as the major cause of teacher turnover.²⁵ Kaplan states that "especially important is the need to work with the entire staff of the [culturally different] school. Many teachers, often unconsciously, may be psychologically rejecting these students; all teachers in such a program should have the opportunity to examine their attitudes, expectations, and practices with regard to these youngsters."²⁶ We might expect, then, that sub-concept NEGRO PUPIL, especially, could be responded to differently from PUPIL depending on the extent of contact the student teacher had with the former.

The academic curriculum of most teacher preparation institutions consists of two basic divisions of formal study: (a) general academic preparation; and (b) professional academic preparation, consisting of courses related directly to the formal teaching function. Since most teacher preparation curriculums are relatively standardized and do not concern themselves

²⁴Ibid.

²⁵Groff, P.J. op. cit.

²⁶Kaplan, B.A. "Issues in Educating the Culturally Disadvantaged." Phi Delta Kappan, November 1963, XLV: 70-76.

with the prospective teacher's potential placement in culturally different public school settings, educators have debated the adequacy and applicability of the two divisions of academic preparation as they are applied to different types of public school environments. Specialized programs for students who will be teaching the culturally different child have been developed at such institutions as Hunter College, Yeshiva University, Newark State Teachers College, and Queens College.²⁷ Results of both the Gottlieb and Groff investigations point to the need for revision of the curriculum - both of the public school as well as that of the teacher preparation institution - in order that "the training program be more realistic" in preparing prospective teachers for the types of placements to which they are assigned as student teachers and, finally, in the first full-time job following certification.^{28,29} Although students enter the student teaching experience with an overall conception of their academic preparation, the initial contact with the school may produce a differential attitude change with respect to the perceived applicability of the two divisions of academic preparation - GENERAL ACADEMIC PREPARATION and PROFESSIONAL ACADEMIC PREPARATION - as a function of placement in a culturally different rather than culturally similar school.

Finally, since the student teaching experience is designed to provide the student with his first opportunity for realistic self-assessment of his two roles as a student and as a teacher, differential attitude change may result in reassessments of SELF AS STUDENT and SELF AS TEACHER as the

²⁷Ibid.

²⁸Gottlieb, D. op. cit.

²⁹Groff, P.J. op. cit.

student moves from the college classroom to the student teaching experience in the public school setting.

Summary: Rationale of the Study

In Chapter II, we presented the purposive function of the student teaching experience and let it serve as the basis for the selection of three concepts related to the experience. Second, we noted that the student teaching experience is essentially one involving self-social systems interactions based on the past experiences of the individual and his perceptions of the social system in which he lives. When the two systems are subjected to a new experience, student teaching, Waisanen's three dimensions of systems interaction - Sentiment, Familiarity, and Power - are involved. These dimensions equate with Osgood's principal factors of Evaluation, Activity, and Potency, respectively, and suggest the employment of the semantic differential bipolar scales in an attempt to assess changes in attitudes as the student moves into the new experience of student teaching. Finally, it was argued that an individual in conflict has three alternative courses of action - retreat, change, and goallessness. But only the alternative of change would be an appropriate mechanism for reducing the conflict encountered by student teachers.

General attitude change should occur as a result of the discrepancy between the student's expectations of concepts and his subsequent perceptions of these same concepts as he moves from the teacher preparation institution to the new experience of student teaching. Differential attitude change may be expected where the student is assigned to a culturally different rather than culturally similar school for his student teaching experience.

This rationale leads to the formulation of a number of hypotheses.

- I. Attitude change about concepts relevant to teaching in public elementary schools should occur as the prospective teacher moves from the teacher preparation institution to the student teaching classroom.
- II. Differential attitude change should occur as a function of the disparity between the student teacher's cultural and experiential background and that of the school he is placed as a student teacher.

CHAPTER III

PROCEDURE

The Instrument

The instrument employed in the assessment of attitude change was the Osgood semantic differential of 50 descriptive scales. The standard 50 x 2 bipolar adjectival scales were paired with six sub-concepts related to the student teaching experience - PUPIL, NEGRO PUPIL, GENERAL ACADEMIC PREPARATION, PROFESSIONAL ACADEMIC PREPARATION, SELF AS STUDENT, and SELF AS TEACHER. The test format and administrative directions were developed to coincide with Osgood's Form II.³⁰ Pre-test and post-test forms of the instrument were identical (Cf. Appendix C for instrument format and administrative directions).

The pre-test semantic differential was administered by representatives of the Michigan State University, College of Education, Office of Student Teaching as a part of the required pre-student teaching conference with cooperating center coordinators and staff immediately preceding the student's first contact with his school. The post-test instrument was administered by the cooperating center coordinator or staff member at the conclusion of a regularly scheduled student teaching seminar following completion of approximately one-half of the ten-week student teaching experience.

³⁰Osgood, C.E., et al. op. cit., pp. 34-37, 82-84.

Description of the Sample

Preliminary information concerning applications for and availability of student teaching placements for Spring Term 1964 were gathered from the records of the Michigan State University, College of Education, Office of Student Teaching and its responsible student teaching cooperating center coordinators.

A sufficient number of culturally similar placements was anticipated since the typical practice is to place student teachers in predominantly white, middle-class public elementary schools. The major concern in the selection of participating student teaching centers was to identify placements in culturally deprived or different schools. Prior to the formal student teaching assignment for the Spring Term 1964, a questionnaire was mailed to 12 center coordinators. The questionnaire requested estimates of the number of culturally different and culturally similar placements as well as a number of other items (Cf. Appendix A for questionnaire). Criteria for a culturally different student teaching placement were specified. Questionnaire returns from five centers anticipated no culturally different student teaching placements for the Spring Term 1964. The remaining seven center coordinators anticipated student teaching placements in both culturally different and culturally similar public elementary schools and met other criteria of acceptance as participating centers. All seven centers were located in major metropolitan cities in Michigan.

The available student sample consisted of 73 Michigan State University, College of Education, white female elementary education majors assigned to kindergarten through grade six student teaching placements in the seven centers for a ten-week student teaching experience. Of the 73 student teachers, 51 were used as subjects in the analyses. A description of the

reasons for the rejection of the 22 not used appears as Table I.

Table I: Reasons for Rejection
of Subjects From Study

Reasons for Rejection	N
Not Available for Pre-Test	7
Special Education Curriculum	3
Negro Student Teachers	2
Elementary/Secondary Music Only	2
Incomplete Test Booklets	2
Not Available for Post-Test	1
Junior High School Placement	1
Previous Teaching Experience	1
Age (40 years)	1
Dropped From Student Teaching	1
Nameless Test Booklet	1
Total	22

Classification of Student Teaching Placements

It was assumed that a principal source of attitude change would be the racial composition and socio-economic characteristics of the school to which the student teacher was assigned. In order to determine the nature of the public elementary school placement, a questionnaire pertaining to the racial composition of the school in which the student teachers were placed, and the socio-economic characteristics of the community served by the school was completed by participating cooperating center coordinators (Cf. Appendix B for questionnaire).

Racial composition was determined by recording the number of white and Negro pupils in each student teacher's classroom and building and, computed separately, the percentage of the total pupil enrollment represented by N Negro pupils. The socio-economic characteristics of each student teacher's school was determined by ratings of cooperating center coordinators. Categories of response on the rating scale were adopted from a 5-point socio-economic rating scale used in one participating center's public school system for the classification of the community served by a school. The categories were as follows: LOW = culturally deprived or different, low transition (social class mobility); L-M = culturally deprived or different, high upward transition; MIDDLE = middle class, low transition; M-H = middle class, high upward transition; and HIGH = professional class, low transition.

The racial composition and socio-economic rating data for the 51 student teaching placements appear in Table II. Classification of placements are presented in rank-order - most to least culturally similar - as perceived by two independent judges on the basis of the background data supplied to them. Both judges noted an identical and natural order in the data. Twenty-one of the student teaching placements were judged to be culturally different and 30 classified as culturally similar. It is worth noting that only one of the culturally different placements was based on the socio-economic rating alone, and this school was located in a non-Negro minority ethnic group area. In addition, three other student teachers in culturally different placements had no Negro pupils in their classrooms, although their schools were integrated.

Table II: Classification of Student Teaching Placements
by Racial Composition and Socio-Economic Rating Data

Culturally Similar Placement			Culturally Different Placement		
% Negro Classroom	% Negro Building	Socio- Economic	% Negro Classroom	% Negro Building	Socio- Economic
00	00	High	00	10	Low-Mid
00	00	Mid-High	00	14	Low-Mid
00	00	Mid-High	00	16	Low-Mid
00	00	Mid-High	00	00	Low
00	00	Mid-High	09	16	Low-Mid
00	00	Middle	15	20	Low-Mid
00	00	Middle	33	33	Mid-High
00	00	Middle	29	29	Middle
00	00	Middle	33	23	Middle
00	00	Middle	29	25	Low-Mid
00	00	Middle	33	34	Low-Mid
00	00	Middle	33	40	Low
00	00	Middle	52	53	Low-Mid
00	00	Middle	55	53	Low-Mid
00	00	Middle	70	61	Low
00	00	Middle	74	61	Low
00	00	Middle	100	100	Middle
00	00	Middle	100	100	Middle
00	004	Middle	90	88	Low-Mid
00	005	Middle	98	98	Low-Mid
02	004	Middle	96	97	Low
03	004	Middle			
04	02	Middle			
04	02	Middle			
00	00	Low-Mid			
00	00	Low-Mid			
00	00	Low-Mid			
00	00	Low-Mid			
00	003	Low-Mid			
00	005	Low-Mid			

Preliminary Data Analyses

As a first step in the analysis a decision was made to reduce the number of bipolar scales so that substitute analysis procedures could be utilized. A criterion of 10-15 scales was selected since this number was assumed to be sufficiently representative of the full set of bipolar scales.

Preliminary reduction of the descriptive bipolar adjective scales to be employed in the final analyses utilized the Michigan State University Computer Laboratory CDC 3600 "FANOD 3" factor analytic program. Twelve program runs were made, one for each sub-concept paired with each test administration. The procedure for the selection of the bipolar scales for the final analyses was as follows: (a) utilizing the Quartimax factor outputs, the number of factors necessary to represent 50 per cent of the total variance was determined; (b) the five scales with the highest factor loadings on each factor were recorded; and (c) the bipolar adjectives appearing most frequently among these sets of five were selected. This procedure resulted in the selection of 13 scales for the final analyses (Cf. Table III under Results: Selection of Descriptive Bipolar Adjectives Scales, pp. 28-29).

Dichotomization into the two placement groups was followed by calculations of means and standard deviations of pre- and post-test scores. Difference scores for each individual on each of six sub-concepts paired with the selected bipolar scales and difference score means ($\bar{d}$) and standard deviations (s_d) were computed. The $\bar{d}$ means were taken as a measure of group attitude change.

Rationale of the Statistical Methodology

Two distinct methods of analysis were suggested by the literature concerning the rate and direction of attitude change during the induction process.

The analysis of scale stability over the time dimension was accomplished by applying a two-tailed t-test to the attitude change mean scores ($\bar{d}$) for each placement group for each of six sub-concepts paired with the individual bipolar scales. Level of rejection of the hypothesis was established at $\alpha = .05$, with degrees of freedom $N-1$.

In order to assess further scale stability across treatments, a test of differential attitude change by placement groups was also performed on a scale-by-scale basis by employing a t-test of attitude change mean score differences between the two placement groups. The tests were computed for each of the six sub-concepts paired with each of the selected bipolar scales. Level of rejection was set at $\alpha = .05$ for a two-tailed test of significance with 49 degrees of freedom.

The second method of analysis involved different considerations. An immediate attitude change of highly significant magnitude may not occur on a sufficient number of individual scales to permit interpretation. But directional movement toward attitude alienation over a set of scales may be exhibited during the induction.

The use of the semantic differential bipolar scales permits an assessment of student teacher attitude movement toward alienation - for example, movement toward "unpleasant" rather than "pleasant" with respect to PUPIL. The determination of the "alienation pole" for each scale was accomplished by asking two independent judges to assign a value to the poles of each scale for each concept under the following directions: "In the course of student teaching a student may move toward one or the other of these poles in rating his feelings about _____. Which pole would a student who has been alienated by his experiences with _____ be likely to move toward?" The above technique permitted the assignment of a "+" or a "-" for movement toward the "non-alienation" and "alienation" poles, respectively, of each scale paired with each of the three major concepts. Sign tests were computed for movement toward the alienation poles - over all 13 bipolar scales - by placement groups and between placements for all sub-concepts and pairs of related sub-concepts. The level of rejection for the

hypotheses was established at $\alpha = .05$ for a one-tailed (directional) test of significance. The procedure is more fully discussed as each test is presented in Chapter IV.

Research Hypotheses

- I. Attitude Change Within Placement Group (Non-Directional Hypothesis). The subsequent attitude score equals the initial attitude score for each of the six sub-concepts paired with each of the 13 selected bipolar scales for both the culturally similar placement student teachers and the culturally different placement student teachers.

- II. Differential Attitude Change Between Placement Groups (Non-Directional Hypothesis). The mean attitude change score for the culturally similar placement student teachers equals the mean attitude change score for the culturally different placement student teachers for each of the six sub-concepts paired with each of the 13 bipolar scales.

- III. Movement Toward Attitude Alienation: Placement x Sub-Concept (Directional Hypotheses). The mean attitude change scores over all 13 bipolar scales for the culturally similar and culturally different placements student teachers is significant in movement toward alienation for the sub-concepts PUPIL, NEGRO PUPIL, GENERAL ACADEMIC PREPARATION, PROFESSIONAL ACADEMIC PREPARATION, SELF AS STUDENT, and SELF AS TEACHER.

IV. Differential Movement Toward Attitude Alienation:

Identical Sub-Concepts x Different Placement (Directional Hypotheses). The mean attitude change scores over all thirteen bipolar scales for sub-concepts PUPIL, NEGRO PUPIL, GENERAL ACADEMIC PREPARATION, PROFESSIONAL ACADEMIC PREPARATION, SELF AS STUDENT, and SELF AS TEACHER is significantly greater in movement toward alienation for the culturally different placement student teachers than for the culturally similar placement student teachers.

V. Differential Movement Toward Attitude Alienation:

Identical Placement x Different Sub-Concepts (Directional Hypotheses).

V-A. The mean attitude change scores over all thirteen bipolar scales for the culturally similar placement student teachers is significantly greater in movement toward alienation for sub-concept PUPIL than for sub-concept NEGRO PUPIL.

V-A The mean attitude change scores over all thirteen bipolar scales for the culturally different placement student teachers is significantly greater in movement toward alienation for sub-concept NEGRO PUPIL than for sub-concept PUPIL.

V-C. The mean attitude change scores over all thirteen bipolar scales for the culturally similar and culturally different placements student teachers is significantly greater in movement toward alienation for sub-concept GENERAL ACADEMIC PREPARATION than for PROFESSIONAL ACADEMIC PREPARATION, and for sub-concept SELF AS TEACHER than for SELF AS STUDENT.

CHAPTER IV

RESULTS

Selection of Descriptive Bipolar Adjectives Scales

As a preliminary step in the examination of the major hypotheses, an analysis of the CDC 3600 "FANOD 3" output was undertaken to determine the number of factors necessary to represent approximately 50% of the total variance for each of 12 combinations of sub-concepts and test administrations. Table III presents the number of factors required - presented as I through V inclusive - and the percent of total variance accounted for by the specified number of factors.

Table III: Number of Factors Required to Meet Criterion
and Per Cent of Total Variance -
By Sub-Concept and Test Administration

Sub-Concept	Period of Test Administration	No. of Factors	% Total Variance
Pupil	Initial	V	.477
Pupil	Subsequent	V	.497
Negro Pupil	Initial	IV	.467
Negro Pupil	Subsequent	IV	.449
General Academic Preparation	Initial	II	.495
General Academic Preparation	Subsequent	III	.493
Professional Academic Prep.	Initial	II	.533
Professional Academic Prep.	Subsequent	III	.478
Self as Student	Initial	IV	.460
Self as Student	Subsequent	IV	.475
Self as Teacher	Initial	III	.442
Self as Teacher	Subsequent	III	.400

For each of the 42 factors, the five scales with the highest loadings were identified and, from among these sets of five, the 13 bipolars which appeared most frequently were selected. Each of these 13 bipolars appeared as a principal loading in at least one-half of the factor analyses. The selected bipolar scales were as follows, with the number of analyses in which each appeared among the sets of five noted in parentheses:

"Hard - Soft"	(8)	"Large - Small"	(6)
"Calm - Agitated"	(8)	"Black - White"	(6)
"Loud - Soft"	(8)	"Heavy - Light"	(6)
"Nice - Awful"	(8)	"Hot - Cold"	(6)
"Pleasant - Unpleasant"	(7)	"Thick - Thin"	(6)
"Bright - Dark"	(7)	"Fresh - Stale"	(6)
"Rough - Smooth"	(7)		

In Appendix D the loading of each of the above bipolars on each of the factors is reported. While this study is not concerned with factor structures, per se, several points are worth noting. For one thing, the factors appear related to the principal ones in Csgood's studies; Evaluation, Potency, and Activity seem appropriate labels for many of the factors identified in Appendix D. Their relative stability over testings and concepts is also worth noting.

The result of the above operations was to select a small number of scales to represent the factor structures of all 50 bipolars over sub-concepts and testings.

Changes in the Concept of CHILDREN

One central outcome of the student teaching experience is presumed to be a reality testing of the student's conception of what children are like within the framework of the public elementary classroom. The principal

concept of CHILDREN was dichotomized into sub-concepts PUPIL and NEGRO PUPIL in order to assess perceptions of children associated with the public elementary school placement.

The attitude change mean scores ($\bar{d}$) are presented for each sub-concept in the tables that follow. Their respective variances are not presented here, since they were found to be relatively homogeneous over all sub-concepts. A complete summary of means and variances for each of the six sub-concepts is reported in Appendix E.

Changes in the Sub-Concept of PUPIL

Table IV contains the means for the sub-concept PUPIL for the two placement groups before student teaching and after five weeks of that experience. Table IV also indicates the mean difference score ($\bar{d}$) computed as each student's subsequent attitude score minus his initial attitude score.

For the 13 individual bipolar scales a significant difference in pre-post scores was found in only two instances: on "rough - smooth" for the culturally different placements (.05) and on "heavy - light" for the culturally similar placements (.05). Thus, Null Hypothesis I was rejected for two tests for sub-concept PUPIL. Also, taken scale by scale, none of the between placements differences under Null Hypothesis II were statistically reliable. Over all, then, on an individual scale basis, the data for sub-concept PUPIL were remarkably stable. In general, the student teachers tended to see PUPIL as "pleasant," "nice," "fresh," and "soft" rather than "hard," and this was true irrespective of the type of placement and the time of the test.

A somewhat better understanding of what occurs as a result of the student teaching experience is provided by assigning a dimension to the 13 scales. Two judges were asked to take the 13 individual scales and assign

Table IV: Pre- and Post-Attitude Scale Means
and Mean Difference for Sub-Concept PUPIL
by Placement Group

Bipolar Scale*	Culturally Similar (N=30)			Culturally Different (N=21)		
	Pre	Post	$\bar{d}$	Pre	Post	$\bar{d}$
Hard - Soft	2.93	3.10	+.17	3.28	3.48	+.62
Calm - Agitated	4.33	4.23	-.10	4.38	4.09	-.29
Loud - Soft	4.57	4.73	+.17	4.86	5.05	+.10
Nice - Awful	6.39	6.09	-.30	6.24	6.18	-.15
Pleasant - Unpleasant	6.23	6.03	-.20	6.28	6.52	+.19
Bright - Dark	5.59	5.66	+.07	5.33	5.19	+.10
Rough - Smooth	3.76	4.16	+.40	3.76	4.38	+.62
Large - Small	3.30	3.76	+.43	3.38	3.57	+.19
Black - White	3.33	3.20	-.13	3.95	3.76	-.19
Heavy - Light	3.00	3.70	+.70	3.33	3.48	+.14
Hot - Cold	4.50	4.73	+.23	4.62	3.56	-.05
Thick - Thin	4.00	4.26	+.27	4.28	4.28	.00
Fresh - Stale	6.03	5.93	-.10	6.00	6.09	+.10

*The adjective listed first represents the "7" pole; the adjective listed second at "1".

a value under the following directions: "In the course of student teaching a student may move toward one or the other of these poles in rating his feelings about pupils. Which pole would a student who has been alienated by his experience with children be likely to move toward?" The two judges agreed unanimously in assigning values. The data in Table IV can now be recast into the three comparisons of Table V. In the columns headed culturally similar and culturally different a "-" has been assigned when " $\bar{d}$ "

Table V: Direction of Mean Difference Score Movement
on Sub-Concept PUPIL

Bipolar Scales*	Culturally Similar	Culturally Different	C.S. x C.D.
Hard - Soft	-	-	C.D.
Agitated - Calm	-	-	C.D.
Loud - Soft	-	-	C.S.
Awful - Nice	-	-	C.S.
Unpleasant - Pleasant	-	+	C.S.
Dark - Bright	+	+	C.S.
Rough - Smooth	-	-	C.D.
Large - Small	-	-	C.S.
Black - White	+	+	C.S.
Heavy - Light	-	-	C.S.
Cold - Hot	+	-	C.D.
Thick - Thin	-	-	C.S.
Stale - Fresh	-	+	C.S.

Totals (-/+)	10/3	9/4	9/4 (C.S.)

* Alienation pole presented first.

represents movement of the group toward the alienation pole. The scales have been arranged with the alienation pole presented first, as "unpleasant - pleasant". In the final column the comparison is between the direction and extent of movement for the two placement groups. The group "most alienated" by its experiences - that is, that has shifted most toward the alienation pole - is indicated in the table by either C.S. for culturally similar or C.D. for culturally different. It should be understood that in this third comparison both the direction and magnitude of movement are under consideration.

It was hypothesized that, in general, students regardless of placements would move toward the alienation poles, but that this movement would be more pronounced for those student teachers placed in the culturally different setting. A one-tailed sign test applied to the data of Table V led to the acceptance of Hypothesis III for the culturally similar placement group. For the student teachers assigned culturally different placements, the movement was in the hypothesized direction but was not reliable for these data (H: III). For the test of differential movement between the two placements with respect to PUPIL (H: IV), the shift was opposite to the predicted direction.

Changes in the Sub-Concept of NEGRO PUPIL

In Table VI are the means for the sub-concept NEGRO PUPIL for the two placement groups before student teaching and following contact. Also shown is the difference score ($\bar{d}$).

Significant differences in pre-post scores for the 13 individual scales (H: I) were found in five tests: on "hard - soft" (.05), "loud - soft" (.01), and "rough - smooth" (.01) for the culturally different placements, and on "loud - soft" (.05) and "hot - cold" (.05) for the culturally similar group. Additionally, only one of the between group differences (H: II) was statistically significant: scale "hot - cold" (.01). On an individual scale basis the data for sub-concept NEGRO PUPIL were stable, but slightly less so than for those reported for PUPIL. It is of interest that, in general, both placement groups tended to perceive NEGRO PUPIL as "nice," "pleasant," and "soft" rather than "hard" just as they had PUPIL. But NEGRO PUPIL was also seen as "bright" rather than "dark," and "black" rather than "white".

As in the analysis of sub-concept PUPIL, the data in Table VI were recast to consider movement toward the alienation poles as a function

Table VI: Pre- and Post-Attitude Scale Means
and Mean Difference for Sub-Concept NEGRO PUPIL
by Placement Group

Bipolar Scales	Culturally Similar (N=30)			Culturally Different (N=21)		
	Pre	Post	$\bar{d}$	Pre	Post	$\bar{d}$
Hard - Soft	2.73	4.30	+.30	4.00	4.71	+.71
Calm - Agitated	3.97	3.60	-.43	3.52	3.48	-.05
Loud - Soft	4.50	4.93	+1.15	4.57	5.33	+.76
Nice - Awful	5.56	5.69	+.13	6.00	5.86	-.14
Pleasant - Unpleasant	5.50	5.53	+.03	5.76	5.81	+.05
Bright - Dark	5.16	5.26	+.10	5.28	4.86	-.43
Rough - Smooth	4.56	4.30	-.27	4.33	4.81	+.48
Large - Small	4.20	4.50	+.30	3.81	4.14	+.33
Black - White	5.06	4.53	-.53	5.28	4.86	-.43
Heavy - Light	3.90	4.06	+.17	3.66	4.14	+.48
Hot - Cold	4.33	4.70	+.37	4.90	4.45	-.48
Thick - Thin	4.36	4.53	+.17	4.52	4.38	-.14
Fresh - Stale	5.06	5.33	+.27	5.00	4.90	-.10

of the student teaching experience. Table VII presents movement data for the culturally similar and culturally different groups, respectively, and also the between placements comparisons. The presentation of these data is identical to that for PUPIL.

The sign test for pre-post movement toward alienation on sub-concept NEGRO PUPIL, performed over the 13 scales, was statistically significant (.05) for culturally different placements in the direction of the hypothesis (H: III). Hypothesis III was rejected for the culturally similar

Table VII: Direction of Mean Difference Score Movement
on Sub-Concept NEGRO PUPIL

Bipolar Scales	Culturally Similar	Culturally Different	C.S. x C.D.
Hard - Soft	-	-	C.D.
Agitated - Calm	-	-	C.S.
Loud - Soft	-	-	C.S.
Awful - Nice	+	-	C.D.
Unpleasant - Pleasant	+	+	C.S.
Dark - Bright	+	-	C.D.
Rough - Smooth	+	-	C.D.
Large - Small	-	-	C.D.
Black - White	+	+	C.D.
Heavy - Light	-	-	C.D.
Cold - Hot	+	-	C.D.
Thick - Thin	-	+	C.S.
Stale - Fresh	+	-	C.D.
Totals (-/+)	6/7	10/3	9/4 (C.D.)

group. It is interesting to note that for the culturally similar group, five of the six bipolar scales for which movement was toward the alienation pole are listed under Osgood's meaning factor of Potency. Differential alienation for the two placement groups was as predicted under Hypothesis IV, the culturally different students exhibited greater alienation, but for these data the shift was not reliable.

Differential Change in Sub-Concepts PUPIL and NEGRO PUPIL by Placements

Between sub-concepts analyses of mean difference scores are of interest since they should indicate the sub-concept - PUPIL or NEGRO PUPIL - toward which the placement groups become "most alienated" as a result of their student teaching experiences. Hypotheses V-A and V-B state that for each placement group, the greater alienation will occur toward the sub-concept of pupils most closely associated with the placement. Table VIII presents the between sub-concepts data for each of the two placement groups. The table differs from those presented for the single sub-concepts (e.g. Table VII) only in that the sub-concept toward which the placement group became most alienated appears as PUPIL or NEGRO PUPIL.

The sign test under Hypothesis V-A was statistically significant for the culturally similar placements (.05) alienation toward PUPIL. The test was not statistically reliable for the culturally different placements and led to the rejection of Hypothesis V-B, although alienation was in the predicted direction for sub-concept NEGRO PUPIL.

Discussion of Results - Concept CHILDREN

Attitude change within each placement and differential attitude change between placements were found, in general, not to be statistically reliable when examined on an individual scale basis. The number of scales for which reliable differences were found do not permit a definitive interpretation of the meaning of the shifts that did occur. Certain characteristics of those scales on which differences were found are of particular interest. An attitude change was noted toward "rough" for perception of PUPIL by the culturally different and "heavy" for those with similar placements. On NEGRO PUPIL the change was toward poles of "hard," "loud," and "rough" for

Table VIII: Sub-Concept Toward Which Placement Group Became Most Alienated: Sub-Concepts PUPIL x NEGRO PUPIL

Bipolar Scales	Culturally Similar	Culturally Different
Hard - Soft	NEGRO PUPIL	NEGRO PUPIL
Agitated - Calm	NEGRO PUPIL	PUPIL
Loud - Soft	NEGRO PUPIL	NEGRO PUPIL
Awful - Nice	PUPIL	PUPIL
Unpleasant - Pleasant	PUPIL	NEGRO PUPIL
Dark - Bright	PUPIL	NEGRO PUPIL
Rough - Smooth	PUPIL	PUPIL
Large - Small	PUPIL	NEGRO PUPIL
Black - White	PUPIL	PUPIL
Heavy - Light	PUPIL	NEGRO PUPIL
Cold - Hot	PUPIL	NEGRO PUPIL
Thick - Thin	PUPIL	NEGRO PUPIL
Stale - Fresh	PUPIL	NEGRO PUPIL
Totals	10/3 (PUPIL)	9/4 (NEGRO PUPIL)

the culturally different placements, and toward "loud" and "hot" for the culturally similar placements. It should be noted that all but the "hot - cold" scale have high loadings on Osgood's factor of Potency, the exception being associated with his Activity dimension. Additionally, the between placements test of "hot - cold" was statistically significant with the change toward "hot" for the culturally similar group and toward "cold" for the culturally different placements in their perceptions of NEGRO PUPIL. None of the scales, as for example "pleasant - unpleasant" which define Osgood's Evaluation, exhibited significant attitude change. The above appears to suggest that the greatest disparity between the students' expectations and

perceptions were reflected in terms of the "potency" of the public elementary school pupil. One could speculate that the concentration of change in the "potency scales" may indicate student teacher concern with classroom control, and the greater number of shifts for the culturally different placements may indicate that the directness of contact may also reflect a higher degree of attitude conflict in teacher-pupil interactions for this group.

The directional analyses of movement toward the "alienation poles" over all scales resulted in the emergence of several patterns of interest. For example, the data in Table VIII clearly indicate that student teachers tended to become more alienated from the sub-concept of CHILDREN most closely associated with their placement; culturally similar placements became most alienated on the sub-concept, PUPIL, and culturally different placement student teachers became most alienated on NEGRO PUPIL. Additional support for the above observation is noted in the culturally similar placement group's movement toward alienation on PUPIL (Cf. Table V) and a similar statistically significant movement by the culturally different placements on NEGRO PUPIL (Cf. Table VII).

The data also suggest a "transfer effect" in directional attitude alienation. The speculations of Gottlieb and other investigators concerning an expectation of greater "cultural shock" for the culturally different placements in their attitudes toward children receive some support in that the C.D. group not only perceived greater alienation toward NEGRO PUPIL but also moved toward alienation on PUPIL, although the latter movement was not statistically reliable. Yet, for the culturally similar placement student teachers, the test of directional alienation on sub-concept NEGRO PUPIL resulted in a rejection of the hypothesis both in mag-

nitude as well as direction. The above results suggest that the impact of the discrepancy between the students' expectations of children and their perceptions following contact may be of sufficient magnitude for a generalized directional alienation toward CHILDREN for only the culturally different placements.

In summary, the data indicate that one of the principal determinants of a prospective teacher's attitude change toward children may be the racial composition and socio-economic characteristics of children associated with his placement. The results also suggest that the greatest disparity between expectations and perceptions was reflected in terms of the potency of the public elementary school pupil and this is true regardless of placement.

Changes in the Concept of ACADEMIC PREPARATION

One purpose of the student teaching experience is to provide the prospective teacher with an opportunity to experience the fusion of principles and theories acquired through academic preparation. The principal concept of ACADEMIC PREPARATION was dichotomized into GENERAL ACADEMIC PREPARATION and PROFESSIONAL ACADEMIC PREPARATION in order to assess expectations and subsequent perceptions of the two basic divisions of preparation as applied to the student teaching experience. The hypotheses predicted attitude change for both placements as a result of a perceived lack of utility of both parts of the students' training during the induction period and that such change would be greater for those students assigned culturally different placements; and, additionally, that GENERAL ACADEMIC PREPARATION would be perceived as the least applicable division for both placement groups.

Changes in the Sub-Concept of GENERAL ACADEMIC PREPARATION

In Table IX are the means for the sub-concept GENERAL ACADEMIC PREPARATION for the two placement groups before and following student teaching. Also shown are the mean difference scores for each of the 13 bipolar scales for the sub-concept.

Table IX: Pre- and Post-Attitude Scale Means and Mean Difference
for Sub-Concept GENERAL ACADEMIC PREPARATION
by Placement Group

Bipolar Scale*	Culturally Similar (N=30)			Culturally Different (N=21)		
	Pre	Post	$\bar{d}$	Pre	Post	$\bar{d}$
Hard - Soft	4.57	4.37	-.20	4.52	4.76	+.24
Calm - Agitated	3.63	4.27	+.63	4.43	4.47	+.05
Loud - Soft	4.34	4.20	-.17	3.90	4.19	+.24
Nice - Awful	4.96	5.29	+.33	5.19	5.05	-.14
Pleasant - Unpleasant	5.40	5.37	-.03	5.19	5.33	+.14
Bright - Dark	4.73	5.20	+.47	4.81	4.62	-.19
Rough - Smooth	4.70	4.46	-.23	4.57	4.43	-.19
Large - Small	5.07	5.07	.00	5.00	5.00	.00
Black - White	3.97	3.76	-.20	4.05	3.81	-.24
Heavy - Light	4.50	4.63	+.10	4.14	4.47	+.33
Hot - Cold	4.33	4.40	+.07	3.71	3.90	+.19
Thick - Thin	4.20	4.56	+.37	4.00	4.24	+.24
Fresh - Stale	4.63	4.83	+.20	4.76	4.43	-.33

For the 13 individual bipolar adjectives scales, the t-tests of mean difference of pre-post test scores were not found to be statistically significant. Additionally, taken scale by scale, none of the between placements differences were statistically reliable. Thus, the tests failed to reject either Null Hypothesis I or Null Hypothesis II for sub-concept GENERAL ACADEMIC PREPARATION. In general, student teachers perceived GENERAL ACADEMIC PREPARATION as "pleasant" rather than "unpleasant," and "large" as opposed to "small." One will note, however, that for most individual bipolar scales the mean rating was from approximately 3.50 to 4.50, the neutral interval on the 7-point semantic scale, indicating a lack of any distinct "favorable" or "unfavorable" perceptions regardless of placement.

Once again the data were recast to account for movement toward the "alienation pole" of the individual scales. It should be noted that the alienation poles for concept ACADEMIC PREPARATION were judged identical to those specified for concept PUPIL. Data concerning movement toward the alienation pole for sub-concept GENERAL ACADEMIC PREPARATION appear in Table X. The same procedural technique described for concept PUPIL was applied for these data.

Sign tests performed for pre-post movement toward alienation on sub-concept GENERAL ACADEMIC PREPARATION - taken over all 13 scales - were not found to be statistically significant for culturally similar, culturally different, or between placements comparisons. It may be worth noting that the direction of movement for the culturally similar group was opposite to the predicted direction. Additionally, although movement toward the alienation poles was not statistically reliable for the between placements

Table X: Direction of Mean Difference Score Movement
on Sub-Concept GENERAL ACADEMIC PREPARATION

Bipolar Scales	Culturally Similar	Culturally Different	C.S. x C.D.
Hard - Soft	+	-	C.D.
Agitated - Calm	+	+	C.D.
Loud - Soft	+	-	C.D.
Awful - Nice	+	-	C.D.
Unpleasant - Pleasant	-	+	C.S.
Dark - Bright	+	-	C.D.
Rough - Smooth	+	+	C.D.
Large - Small	0*	0*	----*
Black - White	+	+	C.S.
Heavy - Light	-	-	C.D.
Cold - Hot	+	+	C.S.
Thick - Thin	-	-	C.S.
Stale - Fresh	+	-	C.D.

Totals (-/+/0)	3/9/1	7/5/1	8/4/1 (C.D.)

* Indicates no directional movement from pre- to post-testings

comparison (H: IV) the movement was in the hypothesized direction - namely, of greater movement toward alienation by the culturally different placements than by the culturally similar group.

Changes in the Sub-Concept of PROFESSIONAL ACADEMIC PREPARATION

Table XI presents the means for sub-concept PROFESSIONAL ACADEMIC PREPARATION and the mean difference scores for individual teacher attitude move-

Table XI: Pre- and Post-Attitude Scale Means and Mean Difference
for Sub-Concept PROFESSIONAL ACADEMIC PREPARATION
by Placement Group

Bipolar Scales	Culturally Similar (N=30)			Culturally Different (N=21)		
	Pre	Post	$\bar{d}$	Pre	Post	$\bar{d}$
Hard - Soft	4.83	4.93	+.10	4.66	4.71	+.05
Calm - Agitated	4.13	4.33	+.20	4.33	4.52	+.11
Loud - Soft	4.63	4.37	-.23	4.19	4.28	+.10
Nice - Awful	4.96	5.43	+.47	5.00	5.09	+.10
Pleasant - Unpleasant	5.07	5.50	+.43	5.09	5.43	+.29
Bright - Dark	4.93	5.03	+.10	4.71	4.71	.00
Rough - Smooth	4.86	4.56	-.30	4.47	4.33	-.14
Large - Small	5.40	5.00	-.37	5.38	4.62	-.76
Black - White	4.20	3.96	-.23	4.05	3.90	-.14
Heavy - Light	4.66	4.70	+.03	4.05	4.28	+.24
Hot - Cold	4.13	4.20	+.07	4.00	3.90	-.10
Thick - Thin	4.23	4.53	+.23	3.86	4.28	+.43
Fresh - Stale	4.79	5.10	+.27	4.52	4.66	+.14

ment from pre- to post-testings for the culturally similar placements and the culturally different group.

A significant difference on pre- and post-scores for the 13 bipolar scales was found only for "nice - awful" (.05) for the culturally similar placements. The remaining tests performed under Null Hypothesis I for the culturally similar and culturally different placements and under Null Hypothesis II led to the acceptance of both hypotheses. Test results for PROFESSIONAL ACADEMIC PREPARATION were, therefore, similar to those re-



corded for sub-concept GENERAL ACADEMIC PREPARATION, and the scale means for the two related sub-concepts were also similar in magnitude.

The mean difference data in Table XI were transformed into directional signs to assess movement toward the alienation poles as a function of the student teaching experiences. The alienation poles are identical for those for the previous sub-concepts. Table XII presents the movement toward the alienation poles for sub-concept PROFESSIONAL ACADEMIC PREPARATION by individual placement category and the between placements comparison.

Table XII: Direction of Mean Difference Score Movement
on Sub-Concept PROFESSIONAL ACADEMIC PREPARATION

Bipolar Scales	Culturally Similar	Culturally Different	C.S. x C.D.
Hard - Soft	-	-	C.S.
Agitated - Calm	+	+	C.D.
Loud - Soft	+	-	C.D.
Awful - Nice	+	+	C.D.
Unpleasant - Pleasant	+	+	C.D.
Dark - Bright	+	0*	C.D.
Rough - Smooth	+	+	C.D.
Large - Small	+	+	C.S.
Black - White	+	+	C.D.
Heavy - Light	-	-	C.D.
Cold - Hot	+	-	C.D.
Thick - Thin	-	-	C.D.
Stale - Fresh	+	+	C.D.

Totals (-/+/0)	3/10/0	5/7/1	11/2/0 (C.D.)

* Indicates no directional movement from pre- to post-testings.

Hypothesis III for the culturally similar placements was rejected for the sub-concept PROFESSIONAL ACADEMIC PREPARATION. As with GENERAL ACADEMIC PREPARATION, the direction of movement was toward the non-alienation poles. Additionally, the sign test was not statistically reliable for the culturally different placements, and movement was also toward the non-alienation poles as specified by the independent judges. The between placements comparison (H: IV) was statistically significant (.01) in the predicted direction, but it should be noted that the differential change in attitudes was not in terms of movement toward greater alienation for the culturally different group rather than the culturally similar group. Since movement for both placements was toward the non-alienation poles, the differential hypothesis must logically be rejected. One can say, however, that the culturally different group was less favorably disposed than was the culturally similar group on the sub-concept PROFESSIONAL ACADEMIC PREPARATION.

The sign tests for Hypothesis V-C were not statistically reliable for either the culturally similar or the culturally different placements (Table XIII). As in the interpretation of Hypothesis IV, since the culturally similar group moved toward non-alienation on both sub-concepts, then the differential analysis revealed that this placement group was less favorably inclined in assessing GENERAL ACADEMIC PREPARATION than PROFESSIONAL ACADEMIC PREPARATION.

Discussion of Results - Concept ACADEMIC PREPARATION

Perhaps the most outstanding result of the analysis of ACADEMIC PREPARATION is the stability of student teacher attitudes. An examination of the data and the instrument itself reveals two interpretations of these results.

Table XIII: Sub-Concept Toward Which Placement Group Became Most Alienated: Sub-Concepts GENERAL ACADEMIC PREPARATION x PROFESSIONAL ACADEMIC PREPARATION

Bipolar Scales	Culturally Similar	Culturally Different
Hard - Soft	PROFESSIONAL	GENERAL
Agitated - Calm	PROFESSIONAL	GENERAL
Loud - Soft	GENERAL	GENERAL
Awful - Nice	GENERAL	GENERAL
Unpleasant - Pleasant	GENERAL	GENERAL
Dark - Bright	PROFESSIONAL	GENERAL
Rough - Smooth	GENERAL	PROFESSIONAL
Large - Small	GENERAL	GENERAL
Black - White	GENERAL	PROFESSIONAL
Heavy - Light	GENERAL	GENERAL
Cold - Hot	----*	PROFESSIONAL
Thick - Thin	GENERAL	PROFESSIONAL
Stale - Fresh	GENERAL	PROFESSIONAL
Totals (-/+/0)	9/3/1 (GENERAL)	8/5/0 (GENERAL)

*Indicates equal directional movement from pre- to post-testings for both sub-concepts.

First, the extreme stability of attitude scores over time for both sub-concepts and each placement may simply reflect the non-applicability of these scales in this context; mean ratings of 3.50 to 4.50 are found for most of the 13 bipolar scales. One limitation of the semantic differential is that a middle rating may mean either position on a scale or the non-relevance of the scale.



Second, the professional course requirements completed as a student in the teacher preparation institution and the student teaching requirement itself were included under the classification of PROFESSIONAL ACADEMIC PREPARATION in defining the concept (Cf. Instrument - PROFESSIONAL ACADEMIC PREPARATION - in Appendix C). The result of the inclusion of these two different requirements under a single heading could have produced a cancelling effect. For example, on the scale "pleasant - unpleasant" the student might respond in the direction of "unpleasant" referring to campus professional academic courses, but perceive the student teaching experience as "pleasant" when reflecting on his work in the classroom and his professional contact with his supervisor. These two different perceptions could result in a cancellation effect in student response to the bipolar scale on PROFESSIONAL ACADEMIC PREPARATION as defined in this study.

Changes in the Concept of SELF

The third concept - SELF - is of importance since the student teaching experience is designed to provide the first realistic opportunity for an individual's self-assessment as a teacher-trainee and as a teacher. The principal concept of SELF was dichotomized into SELF AS STUDENT and SELF AS TEACHER to permit assessment of attitude change toward two self-systems as a function of the induction process. Movement toward alienation was predicted for both placement groups, in their assessments of each sub-concept, and it was hypothesized that the students assigned culturally different placements would exhibit greater alienation than would the culturally similar placements on both sub-concepts. Finally, it was predicted that for both placement groups there would be greater alienation toward SELF AS TEACHER than on SELF AS STUDENT since students would show

greater concern with their teacher-role than with student-role during the induction.

Changes in the Sub-Concept of SELF AS STUDENT

In Table XIV are the means and difference scores for each scale on sub-concept SELF AS STUDENT for the two placement groups for pre- and post-testings.

Table XIV: Pre- and Post-Attitude Scale Means and Mean Difference for Sub-Concept SELF AS STUDENT by Placement Group

Bipolar Scales	Culturally Similar (N=30)			Culturally Different (N=21)		
	Pre	Post	$\bar{d}$	Pre	Post	$\bar{d}$
Hard - Soft	3.73	3.97	+.23	3.24	4.00	+.76
Calm - Agitated	5.00	4.67	+.33	5.19	4.90	-.29
Loud - Soft	4.03	3.33	+.43	3.33	3.86	+.52
Nice - Awful	5.79	5.83	+.03	6.04	6.00	-.05
Pleasant - Unpleasant	5.87	5.83	-.03	6.04	6.19	+.14
Bright - Dark	5.46	5.49	+.03	5.38	5.81	+.43
Rough - Smooth	3.36	3.50	+.13	3.28	3.24	-.05
Large - Small	4.57	4.76	+.26	4.28	4.63	+.33
Black - White	2.93	3.03	+.10	2.57	2.95	+.38
Heavy - Light	3.76	4.10	+.33	3.86	3.86	.00
Hot - Cold	4.40	4.70	+.30	4.52	4.57	.00
Thick - Thin	4.56	4.70	+.13	4.09	4.76	+.67
Fresh - Stale	5.69	5.49	-.20	5.57	5.71	+.14

The Null Hypothesis I was rejected for the culturally different placements for "hard - soft" (.05) and "bright - dark" (.05). Statistical tests of all scales failed to reject the null hypothesis for the culturally similar group. Additionally, the between placement tests (H: II) were not found to be statistically significant for any of the 13 bipolar scales. In general, student teachers perceived SELF AS STUDENT as "nice," "pleasant," "bright," and "fresh" rather than "stale."

As in the previous directional analyses, the data in Table XIV were converted to show movement toward the alienation pole of the 13 adjectival scales. The judges reversed the direction of the "alienation pole" for scale "hard - soft." Table XV presents movement on Sub-Concept SELF AS STUDENT for the 13 scales by placements and between comparison.

Sign tests for pre-post movement toward alienation taken over all 13 adjectival scales on sub-concept SELF AS STUDENT were not statistically significant for the culturally similar, culturally different, or between placements comparisons and, therefore, Hypotheses III and IV, respectively, were rejected.

Changes in the Sub-Concept of SELF AS TEACHER

The means for sub-concept SELF AS TEACHER appear as Table XVI and are presented for the two placement groups by test administrations. The pre- and post-mean difference score ($\bar{d}$) appears in the final column.

Tests of Null Hypothesis I resulted in significant differences for scales "hard - soft" (.05), "agitated - calm" (.05), and "thick - thin" (.05) for the culturally different placements. On none of the 13 bipolar scales were statistically reliable differences recorded for the culturally similar placements, and the between placements comparisons (H: II) were

Table XV: Direction of Mean Difference Score Movement
on Sub-Concept SELF AS STUDENT

Bipolar Scales	Culturally Similar	Culturally Different	C.S. x C.D.
Soft - Hard	+	+	C.S.
Agitated - Calm	+	-	C.D.
Loud - Soft	-	-	C.D.
Awful - Nice	+	-	C.D.
Unpleasant - Pleasant	-	+	C.S.
Dark - Bright	+	+	C.S.
Rough - Smooth	-	+	C.S.
Large - Small	-	-	C.D.
Black - White	-	-	C.D.
Heavy - Light	-	0*	C.S.
Cold - Hot	+	0*	C.D.
Thick - Thin	+	+	C.S.
Stale - Fresh	-	+	C.S.
Totals (-/+0)	7/6/0	5/6/2	7/6/0 (C.S.)

*Indicates no directional movement from pre- to post-testings.

not statistically significant. As was the case with the SELF AS STUDENT sub-concept, data for SELF AS TEACHER were extremely stable over time, although slightly less stable for the culturally different placement group.

The data in Table XVI were recast to consider movement toward the alienation poles and are presented in Table XVII for sub-concept SELF AS TEACHER by placements and between placements.

Table XVI: Pre- and Post-Attitude Scale Means and Mean Difference for Sub-Concept SELF AS TEACHER by Placement Group

Bipolar Scales	Culturally Similar (N=30)			Culturally Different (N=21)		
	Pre	Post	$\bar{d}$	Pre	Post	$\bar{d}$
Hard - Soft	4.33	4.33	.00	4.05	4.76	+.71
Calm - Agitated	5.43	5.27	-.13	5.66	5.09	-.57
Loud - Soft	3.97	4.23	+.27	3.95	4.38	+.43
Nice - Awful	6.03	5.93	-.10	6.09	6.04	-.05
Pleasant - Unpleasant	6.23	6.00	-.27	6.25	6.14	-.14
Bright - Dark	5.96	5.63	-.10	5.71	5.66	-.05
Rough - Smooth	4.10	4.20	+.13	3.81	3.81	.00
Large - Small	4.60	4.70	+.07	4.47	4.57	+.10
Black - White	3.06	3.10	+.03	3.38	3.24	-.14
Heavy - Light	4.30	4.16	-.13	3.81	4.19	+.38
Hot - Cold	4.50	4.70	+.20	4.62	4.81	+.24
Thick - Thin	4.40	4.60	+.20	4.47	4.43	-.05
Fresh - Stale	5.93	5.69	-.23	6.00	5.76	-.24

The sign tests performed over the entire 13 scales for movement toward alienation on sub-concept SELF AS TEACHER were not statistically significant for either of the two placement groups, although movement was clearly in the direction of alienation as predicted under Hypothesis III. Additionally, the non-significant results of the between placements tested led to the rejection of Hypothesis IV.

Table XVII: Direction of Mean Difference Score Movement
on Sub-Concept SELF AS TEACHER

Bipolar Scales	Culturally Similar	Culturally Different	C.S. x C.D.
Soft - Hard	0*	+	C.S.
Agitated - Calm	-	-	C.D.
Loud - Soft	-	-	C.D.
Awful - Nice	-	-	C.S.
Unpleasant - Pleasant	-	-	C.S.
Dark - Bright	-	-	C.S.
Rough - Smooth	-	0*	C.S.
Large - Small	-	-	C.D.
Black - White	-	+	C.S.
Heavy - Light	+	-	C.D.
Cold - Hot	+	+	C.S.
Thin - Thick	+	-	C.D.
Stale - Fresh	-	-	C.D.
Totals (-/+ / 0)	9/3/1	9/3/1	7/6/0 (C.S.)

* Indicates no directional movement from pre- to post-testings.

Changes in Sub-Concepts SELF AS STUDENT and
SELF AS TEACHER by Placements

Table XVIII presents the data for the two placement groups for movement toward alienation on SELF AS STUDENT and SELF AS TEACHER. The sub-concept toward which the placement group became most alienated appears as STUDENT or TEACHER.

Table XVIII: Sub-Concept Toward which Placement Group Became Most Alienated: Sub-Concepts SELF AS STUDENT x SELF AS TEACHER

Bipolar Scales	Culturally Similar	Culturally Different
Soft - Hard	TEACHER	TEACHER
Agitated - Calm	TEACHER	TEACHER
Loud - Soft	STUDENT	STUDENT
Awful - Nice	TEACHER	-----*
Unpleasant - Pleasant	TEACHER	TEACHER
Dark - Bright	TEACHER	TEACHER
Rough - Smooth	-----*	TEACHER
Large - Small	STUDENT	STUDENT
Black - White	STUDENT	STUDENT
Heavy - Light	STUDENT	TEACHER
Cold - Hot	TEACHER	STUDENT
Thin - Thick	STUDENT	TEACHER
Stale - Fresh	TEACHER	TEACHER

Totals (-/+ / 0)	7/5/1 (TEACHER)	8/4/1 (TEACHER)

*Indicates equal directional movement from pre- to post-testings for both sub-concepts.

The sign tests for differential movement toward alienation for identical placements x different sub-concepts (H: V-C) were not statistically significant for either the culturally similar or the culturally different placements on sub-concepts SELF AS TEACHER and SELF AS STUDENT. It is of some interest that both placement groups agreed on the direction of movement for specified sub-concept on seven of the 11 bipolar scales for which movement was recorded.

Discussion of Results - Concept SELF

The results of the analyses for concept of SELF indicate a remarkable stability in student teacher attitudes over a time dimension regardless of student teaching placement with two basic exceptions. First, the individual scale tests of alienation under Hypothesis I resulted in the rejection of the null for only the culturally different placements on scales of the sub-concept SELF AS STUDENT and SELF AS TEACHER. Thus, on this basis there appears to have been greater attitude change for the culturally different placements, although the tests of differential attitude alienation by placements were not statistically reliable for these data. Second, most of the directional alienation hypotheses were rejected when the analyses were based over all 13 bipolar scales, although the student teachers in both placement groups moved toward alienation in their perceptions of SELF AS TEACHER as predicted.

These results suggest two possible interpretations of the analyses: (1) the SELF-attitudes of student teachers are not affected as they move from college to the student teaching experience; or (2) the student teachers had not yet experienced sufficient conflict in student-teacher role to necessitate a major reassessment of their attitudes toward SELF. Since the data do indicate some attitude change and, additionally, since these results are in the direction of alienation for both placements as SELF AS TEACHER, the second alternative appears to be the more likely interpretation of the data. This conclusion is supported by reference to the earlier analyses of the concepts PUPIL and NEGRO PUPIL. Of critical importance is the time interval between testings - just prior to student teaching and five weeks into the experience. It seems likely that most

student teachers would experience greater attitude conflict in their concept of PUPILS and NEGRO PUPILS since the contact with pupils is immediate. In addition, most student teachers would not have taken on the teacher-role fully at five weeks; that is, the students would not be in the position of full-time teaching and may not have been subjected to role dissonance of sufficient magnitude to warrant a major reassessment of themselves as students and/or as teachers. The determination of the accuracy of this speculation would, quite obviously, necessitate the use of additional instrumentation to determine the extent to which the individual students had been given full responsibility in their placements.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Summary and Discussion of Results

This investigation's goal was to assess changes in the attitudes of white female elementary education student teachers as a function of their placement in classrooms in which the pupils were culturally different from themselves.

An analysis of the purposive function of the student teaching experience served as the basis for the selection of three central concepts related to the experience: CHILDREN, ACADEMIC PREPARATION, and SELF. The student teaching experience is essentially one involving a challenge to previously established patterns of self-social systems interaction. The reassessment required by the new experience was assumed to involve at least three dimensions: Sentiment, Familiarity, and Power. These dimensions are similar to Osgood's principal meaning factors of Evaluation, Activity, and Potency, respectively, and suggest the employment of his semantic differential bipolar scales in an attempt to assess changes in attitudes as the student moved through the new experience of student teaching.

It was hypothesized that a general attitude change should occur as a result of the discrepancy between the student's initial expectations and his subsequent perceptions as he moved from the teacher preparation institution to the student teaching classroom. Differential attitude

change was predicted as a function of the racial composition and socio-economic characteristics of the classroom to which the student teachers were assigned, with greater change predicted for student teachers assigned to pupils with backgrounds culturally different from their own. It was also hypothesized that contact with one rather than another student teaching environment should result in a differential attitude change on related sub-concepts: PUPIL and NEGRO PUPIL; GENERAL ACADEMIC PREPARATION and PROFESSIONAL ACADEMIC PREPARATION; and SELF AS STUDENT and ~~SELF AS~~ TEACHER.

The instrument employed to assess these hypotheses was the standard 50 x 2 Osgood semantic bipolar adjectives scales paired with the six sub-concepts. Identical pre- and post-test forms were administered immediately prior to the student's first contact with the school and following completion of one-half of the ten-week student teaching experience.

The sample consisted of 51 Michigan State University, College of Education, white female elementary education majors assigned to kindergarten through grade six student teaching placements in schools located in seven metropolitan cities in Michigan.

Dichotomization of student teaching placements was accomplished on criteria of racial composition of the student teachers' classrooms and schools and by rating the socio-economic characteristics of the community served by the school. On the basis of these criteria, 21 of the student teaching placements were judged to be culturally different and 30 were classified as culturally similar. Factor analyses were utilized to reduce the data, resulting in the selection of 13 bipolar scales - representing the factor structures of all 50 bipolars over sub-concepts and testings - which were employed in the final analyses.

Two methods of analyses were used. First, an evaluation of individual scale stability over the time dimension was accomplished by applying a two-tailed t-test to the attitude change mean scores - mean difference score, $\bar{d}$, of the subsequent scale response score minus the initial scale response score for each individual - which were computed for each placement group on each of the six sub-concepts paired with the 13 individual bipolar scales. Scale stability across placements was assessed, on a scale-by-scale basis, by employing a t-test of attitude change mean score differences between the two placement groups. These tests were computed for each of the six sub-concepts paired with each of the selected bipolar scales. The second method of analysis involved the consideration of the direction of movement over 13 scales taken as a set. The "alienation pole" of each scale was determined by having independent judges assign an "alienation" and "non-alienation" value, respectively, to the poles of the Osgood scales. This was done separately for each of the major concepts. Sign tests were used to test for movement toward alienation by and between placement groups for each sub-concept and pairs of related sub-concepts. A summary of the results is presented below for each major concept.

CHILDREN. Attitude changes within and between placement types were found, in general, not to be statistically reliable when examined on an individual scale basis. Although the number of scales for which reliable differences were found did not permit a definitive interpretation of the meaning of such shifts as did occur, the results suggested that the greatest disparity between expectations and subsequent perceptions of elementary school children was reflected in terms of the "potency" (in Osgood's sense) of the children and this was true regardless of placement.

The directional analysis of movement toward the "alienation poles" over all 13 scales indicated that student teachers tended to become "most alienated" on the sub-concept of CHILDREN most closely associated with their placement. Over-all, the results of both analyses provided a basis for concluding that, with respect to CHILDREN, the alienation hypotheses were partially supported.

ACADEMIC PREPARATION. The chief result of the analyses of the concept ACADEMIC PREPARATION was the indications of stability in the student teacher attitudes regardless of placement. Moreover, such movement as did occur on the sub-concepts were toward the "non-alienation" rather than the predicted "alienation" poles. An examination of the data and the instrument itself revealed two possible interpretations of these results. First, the stability of attitude scores may have reflected the non-applicability of the scales to these concepts. Second, the inclusion of the student teaching requirement itself in the definition given for PROFESSIONAL ACADEMIC PREPARATION may have produced a cancelling effect in the students' judgements, resulting in neutrality on the ratings.

SELF. The results of the analyses for concept SELF also showed stability in student teachers' attitudes regardless of placement. Although differential tests of attitude change were not statistically reliable, there appeared to have been some tendency for greater change toward concept of SELF for the students in culturally different placements than for the culturally similar group. Most of the directional alienation hypotheses were rejected, but the student teachers in both placements moved toward greater alienation in their perceptions of SELF AS TEACHER, as predicted. These results suggested two possible interpretations: (1) the SELF-attitudes of student teachers were essentially

stable as they moved from the college to the student teaching experience; or (2) the student teachers had not as yet experienced conflict of sufficient magnitude to necessitate a major reassessment of their attitudes toward SELF. Since the data did indicate some change in the predicted direction of alienation for both placement groups toward their conception of SELF AS TEACHER, the second alternative appeared to be the more likely interpretation.

Implications

Of critical importance to the over-all interpretation of the results is the time interval between test administrations - just prior to the onset of student teaching and five weeks into the experience. In the rationale of the study, it was noted that the student teaching experience provides the teacher-trainee with his first extended opportunity to test the applicability of previously formed attitudes in a real school setting. It seems reasonable that most student teachers would experience a significant degree of attitude conflict between their expectations and subsequent perceptions of CHILDREN since the prospective teacher's contact with public elementary school pupils is immediate and direct from the first day of student teaching. Results of this study indicate that student teachers' attitudes toward CHILDREN do change as a result of contact with children and, moreover, that attitude change is differentiated as a function of contact with the types of pupils associated with the school placement. On the other hand, student teachers would not necessarily have taken on the teacher-role completely at five weeks, and therefore may not have been subjected to the role dissonance in their concept of SELF as either student or teacher. The limited time interval between test administrations may have affected the extent of attitude change as reflected by the scale.

responses. Similarly, the student may not, in the first five weeks of student teaching, experience sufficient conflict to lead to a reassessment of attitudes toward his conception of ACADEMIC PREPARATION. This suggests that an extension of this study should allow for greater time interval between testings - such as entry, five weeks, and at point of exit from the student teaching experience. Such a study might result in a more precise test of attitude change and directional alienation during the induction.

Although the results of this study offer support to the proposition of differential attitude change as a function of the racial composition and socio-economic characteristics of the public school placement, the use of a larger sample of student teachers and the application of more rigorous criteria governing both the cultural and experiential backgrounds of student teachers, student teaching assignment procedures, and classification of the student teaching placements by grade level and cultural characteristics should permit a more substantial assessment of attitude change as a function of placement.

Results of this study indicate that the employment of the semantic differential bipolar scales poses severe restrictions on its applicability to the assessment of attitude change over a limited time interval. The ambiguity of the "4" response position on the scale, indicating either a "neutral" position in response to the item or the non-relevance of the scale, does not permit a definitive interpretation of the data. Since the literature and results of this study concerning the period and rate of attitude change during the student teaching experience suggested that an immediate attitude change of highly significant magnitude does not necessarily occur when assessed over a limited time dimension, the use of additional instrumentation, such as depth interviews with both student teachers and their supervisors, should reveal with more precision the extent to which the in-



dividual has assumed full responsibility for the classroom. Additionally, such instrumentation should incorporate an assessment of the perceived reasons for attitude and behavior changes as a function of the student teaching experience.

Finally, the rationale of this study appeared to have been sufficiently supported by the results to warrant further consideration and research concerning reassessments of attitudes as a function of the student teaching placement.

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APPENDIX A

CENTER: _____

Return to: Al Elwell
211 Erickson
MSU

COORDINATOR: _____

Criteria for student placed in a "culturally different" school:

1. Elementary education major at MSU;
2. Student teaching Spring Term 1964;
3. Female Student;
4. "Culturally different" placement -- public elementary school in which the majority of the pupil population is non-white.

_____	NUMBER OF "CULTURALLY DIFFERENT" PLACEMENTS AVAILABLE FOR STUDY
No. Student Teachers	

_____	NUMBER OF "NORMAL" OR "CULTURALLY SIMILAR" PLACEMENTS AVAILABLE FOR STUDY.
No. Student Teachers	

_____	_____	Could time be made available for post-test administration? (Post-test planned for 5-6 weeks into student teaching experience. Estimated time for test administration of two hours. Only one test administration during the ten-week student teaching experience. Test may be administered by investigator or, if you prefer, by your staff.)
Yes	No	

_____	_____	Are there any administrative regulations governing research -- i.e., do you anticipate problems with the public school system(s) involved?
Yes	No	

_____	_____	Are you interested and willing to participated in the study?
Yes	No	

_____	_____	Do you have any questions pertaining to the proposed study? (If YES, please list below.)
Yes	No	

THANK YOU

APPENDIX B

Return to: Al Elwell
211 Erickson
M.S.U.

COORDINATOR:

[illegible]

DIRECTIONS:

- a. Name of Student Teacher: Administer Post-Test ONLY to student teachers listed above.
- b. Number of Pupils -- Classroom: Actual number of white and non-white pupils in student teaching classroom.
- c. Number of Pupils -- Building Placement: Same as (b), but for building placement.
- d. Socio-Economic Level -- Building Placement:
LOW = Culturally Different/Deprived; Low Transition (social class mobility);
L-M = Culturally Different/Deprived; High Upward Transition;
MID = Middle Class; Low Transition;
M-H = Middle Class; High Upward Transition;
HIGH = Professional Class; Low Transition

APPENDIX C

NAME: _____
 (last) (first) (initial)

MEASURE OF CONCEPT MEANINGS -- I

INSTRUCTIONS

The purpose of this study is to measure the meanings of certain things to various people by having them judge them against a series of descriptive scales. In taking this test, please make your judgments on the basis of what these things mean to you. On each page of this booklet you will find a different concept to be judged and beneath it a set of scales. You are to rate the concept on each of these scales in order.

Here is how you are to use these scales:

If you feel that the concept at the top of the page is very closely related to one end of the scale, you should place your check-mark as follows:

fair X : ____ : ____ : ____ : ____ : ____ : ____ unfair

or

fair ____ : ____ : ____ : ____ : ____ : ____ : X unfair

If you feel that the concept is quite closely related to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

strong ____ : X : ____ : ____ : ____ : ____ : ____ weak

or

strong ____ : ____ : ____ : ____ : ____ : X : ____ weak

If the concept seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

active ____ : ____ : X : ____ : ____ : ____ : ____ passive

or

active ____ : ____ : ____ : ____ : X : ____ : ____ passive

The direction toward which you check, of course, depends upon which of the two ends of the scale seems most characteristic of the thing you're judging.

If you consider the concept to be neutral on the scale, both sides of the scale equally associated with the concept, or if the scale is completely irrelevant, unrelated to the concept, then you should place your check-mark in the middle space:

safe ____ : ____ : ____ : X : ____ : ____ : ____ dangerous

INSTRUCTIONS (cont.)

IMPORTANT: (1) Place your check-marks in the middle of the spaces, not on the boundaries:

____:____:____: X : ____ X : ____
 THIS NOT THIS

- (2) Be sure you check every scale for every concept -- DO NOT OMIT ANY.
- (3) Never put more than one check-mark on a single scale.

Sometimes you may feel as though you've had the same item before on the test. This will not be the case, so do not look back and forth through the items. Do not try to remember how you checked similar items earlier on the test. Make each item a separate and independent judgment. Work at a fairly high speed through this test. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the items, that we want. On the other hand, please do not be careless, because we want your true impressions.

NOTE: THERE ARE NO "RIGHT" OR "WRONG" ANSWERS -- WE WANT YOUR FIRST IMPRESSIONS.

PUPIL: Pupil in the public elementary school

good	____:____:____:____:____:____:____	bad
large	____:____:____:____:____:____:____	small
beautiful	____:____:____:____:____:____:____	ugly
yellow	____:____:____:____:____:____:____	blue
hard	____:____:____:____:____:____:____	soft
sweet	____:____:____:____:____:____:____	sour
strong	____:____:____:____:____:____:____	weak
clean	____:____:____:____:____:____:____	dirty
high	____:____:____:____:____:____:____	low
calm	____:____:____:____:____:____:____	agitated
tasty	____:____:____:____:____:____:____	distasteful
valuable	____:____:____:____:____:____:____	worthless
red	____:____:____:____:____:____:____	green
young	____:____:____:____:____:____:____	old
kind	____:____:____:____:____:____:____	cruel
loud	____:____:____:____:____:____:____	soft
deep	____:____:____:____:____:____:____	shallow

PUPIL: Pupil in the public elementary school

pleasant ___:___:___:___:___:___:___ unpleasant

black ___:___:___:___:___:___:___ white

bitter ___:___:___:___:___:___:___ sweet

happy ___:___:___:___:___:___:___ sad

sharp ___:___:___:___:___:___:___ dull

empty ___:___:___:___:___:___:___ full

ferocious ___:___:___:___:___:___:___ peaceful

heavy ___:___:___:___:___:___:___ light

wet ___:___:___:___:___:___:___ dry

sacred ___:___:___:___:___:___:___ profane

relaxed ___:___:___:___:___:___:___ tense

brave ___:___:___:___:___:___:___ cowardly

long ___:___:___:___:___:___:___ short

rich ___:___:___:___:___:___:___ poor

clear ___:___:___:___:___:___:___ hazy

hot ___:___:___:___:___:___:___ cold

thick ___:___:___:___:___:___:___ thin

PUPIL: Pupil in the public elementary school

nice	____:____:____:____:____:____:____	awful
bright	____:____:____:____:____:____:____	dark
bass	____:____:____:____:____:____:____	treble
angular	____:____:____:____:____:____:____	rounded
fragrant	____:____:____:____:____:____:____	foul
honest	____:____:____:____:____:____:____	dishonest
active	____:____:____:____:____:____:____	passive
rough	____:____:____:____:____:____:____	smooth
fresh	____:____:____:____:____:____:____	stale
fast	____:____:____:____:____:____:____	slow
fair	____:____:____:____:____:____:____	unfair
rugged	____:____:____:____:____:____:____	delicate
near	____:____:____:____:____:____:____	far
pungent	____:____:____:____:____:____:____	bland
healthy	____:____:____:____:____:____:____	sick
wide	____:____:____:____:____:____:____	narrow

Instrument format utilized for sub-concepts NEGRO PUPIL, GENERAL ACADEMIC PREPARATION, PROFESSIONAL ACADEMIC PREPARATION, SELF AS STUDENT, and SELF AS TEACHER was identical to that presented for sub-concept PUPIL. Sub-concepts were defined and presented in the following order:

PUPIL: Pupil in the public elementary school.

GENERAL ACADEMIC PREPARATION: General academic requirements, including Basic College and Major and Minor Areas, but EXCLUDING THE FOLLOWING: ED 200 (Educational Psychology); ED 301 (School and Society); ED 321 (Methods Block); required visitations, such as the "September Experience"; and ED 346 (Student Teaching).

SELF AS STUDENT: Self as a college student.

NEGRO PUPIL: Negro pupil in the public elementary school.

PROFESSIONAL ACADEMIC PREPARATION: Professional academic requirements, SPECIFICALLY THE FOLLOWING: ED 200 (Educational Psychology); ED 301 (School and Society); ED 321 (Methods Block); required visitations, such as the "September Experience"; and ED 346 (Student Teaching).

SELF AS TEACHER: Self as a public elementary school teacher.

APPENDIX D

Table D-1: Pre-Post Test Quartimax Factor Loadings
for N Factors, 13 Bipolar Scales, on Sub-Concept PUPIL,
Concept PUPIL

Bipolar Scales*	Pre-Test					Post-Test				
	I	II	III	IV	V	I	II	III	IV	V
Hard	.23	(.54)	.11	.16	.13	.32	.10	.35	.18	(.60)
Calm	.01	.36	(.56)	.12	.23	.03	(.69)	.03	.19	.03
Loud	.36	.09	.44	.34	.24	.03	.37	.01	(.53)	.27
Nice	.32	.02	.01	.00	(.68)	.54	.43	.24	.44	.04
Pleasant	.36	.14	.11	.17	(.66)	.53	.14	.17	(.46)	.42
Bright	.53	.15	.22	(.45)	.29	(.66)	.00	.05	.12	.03
Rough	.14	.41	.47	.32	.08	.32	.29	.34	.34	.23
Large	.08	(.57)	.40	.20	.26	.00	.08	(.67)	.05	.22
Black	.15	(.61)	.27	.01	.06	.06	.02	.26	.00	(.70)
Heavy	.57	.43	.02	.14	.16	.26	.15	.44	.03	.04
Hot	.53	.03	.22	.34	.04	.61	.43	.04	.22	.01
Thick	.53	.45	.11	.24	.02	(.69)	.11	.01	.12	.15
Fresh	(.66)	.23	.09	.11	.21	(.67)	.04	.02	.04	.17

* "7" pole of bipolar scale of instrument format.

() indicates loading in top five for specified factor.

Table D-2: Pre-Post Test Quartimax Factor Loadings
for N-Factors, 13 Bipolar Scales on Sub-Concept PUPIL
Concept NEGRO PUPIL

Bipolar Scales	Pre-Test				Post-Test			
	I	II	III	IV	I	II	III	IV
Hard	.29	.42	.26	.38	.07	.51	.30	.49
Calm	.39	(.57)	.07	.22	.40	.10	.47	.08
Loud	.18	(.72)	.04	.00	.01	.12	(.66)	.01
Nice	.60	.06	.26	.29	(.80)	.25	.04	.16
Pleasant	.51	.28	.50	.29	(.72)	.13	.13	.12
Bright	.60	.11	.25	.23	.46	.11	.21	.36
Rough	.28	(.58)	.02	.27	.22	.31	.26	(.60)
Large	.31	.27	.19	(.54)	.18	.54	.20	.03
Black	.26	.04	.05	.31	.11	.14	.18	(.63)
Heavy	.36	.30	.35	.34	.03	(.54)	.00	.15
Hot	.30	(.64)	.11	.18	.03	.12	(.60)	.48
Thick	.13	(.72)	.10	.08	.28	.15	(.75)	.07
Fresh	(.73)	.00	.10	.06	.41	.18	.05	.58

Table D-3: Pre-Post Test Quartimax Factor Loadings
for N Factors, 13 Bipolar Scales on Sub-Concept PUPIL,
Concept GENERAL ACADEMIC PREPARATION

Bipolar Scale	Pre-Test		Post-Test		
	I	II	I	II	III
Hard	.09	(.63)	.00	(.58)	.06
Calm	.42	(.57)	.05	(.73)	.21
Loud	.27	(.68)	.50	.22	.31
Nice	(.80)	.09	.73	.16	.11
Pleasant	(.82)	.14	.76	.12	.12
Bright	(.87)	.03	.75	.08	.21
Rough	.36	.31	.07	(.53)	.08
Large	.21	.52	.28	.38	(.62)
Black	.37	.42	.16	.28	.03
Heavy	.22	(.70)	.31	.32	(.53)
Hot	.65	.28	.61	.08	.23
Thick	.71	.37	.76	.04	.23
Fresh	.75	.00	(.86)	.06	.03

Table D-4: Pre-Post Test Quartimax Factor Loadings
for N Factors, 13 Bipolar Scales, on Sub-Concept PUPIL,
Concept PROFESSIONAL ACADEMIC PREPARATION

Bipolar Scale	Pre-Test		Post-Test		
	I	II	I	II	III
Hard	.03	(.72)	.30	(.60)	.06
Calm	.66	.27	.01	(.68)	.04
Loud	.01	(.82)	.16	.35	(.60)
Nice	(.90)	.01	(.79)	.04	.16
Pleasant	.85	.11	.73	.06	.21
Bright	(.89)	.08	.77	.13	.01
Rough	.01	(.65)	.00	(.59)	.20
Large	.20	.64	.28	(.59)	.02
Black	.26	(.67)	.26	.38	.25
Heavy	.23	.64	.43	(.56)	.05
Hot	.78	.04	.63	.02	.37
Thick	.66	.30	.61	.19	.40
Fresh	.84	.12	.71	.00	.11

Table D-5: Pre-Post Test Quartimax Factor Loadings
for N Factors, 13 Bipolar Scales, on Sub-Concept PUPIL,
Concept SELF AS STUDENT

Bipolar Scales	Pre-Test				Post-Test			
	I	II	III	IV	I	II	III	IV
Hard	.06	.12	.43	.32	.05	(.67)	.24	.18
Calm	.58	.31	.29	.34	.11	.08	.29	(.68)
Loud	.14	.46	.37	.20	.14	(.60)	.03	.23
Nice	(.72)	.21	.10	.24	(.76)	.02	.13	.11
Pleasant	(.74)	.18	.29	.06	.72	.15	.10	.25
Bright	(.72)	.36	.03	.12	(.77)	.03	.24	.14
Rough	.28	.41	.19	.43	.29	.12	.49	.26
Large	.34	.49	.24	.25	.51	.05	.52	.03
Black	.01	.18	(.79)	.05	.35	.28	.16	.04
Heavy	.10	.23	(.53)	.07	.05	(.68)	.15	.04
Hot	.18	(.61)	.01	.06	.41	.07	.46	.05
Thick	.20	(.69)	.32	.21	.38	.38	(.62)	.13
Fresh	.71	.31	.06	.01	(.76)	.16	.15	.03

Table D-6: Pre-Post Test Quantitative Factor Loadings
for N Factors, 13 Bipolar Scales, on Sub-Concept PUPIL,
Concept SELF AS TEACHER

Bipolar Scales	Pre-Test			Post-Test		
	I	II	III	I	II	III
Hard	.10	.39	.27	.20	.05	(.68)
Calm	.55	.08	.07	.26	.11	(.64)
Loud	.08	.36	.14	.09	.15	(.62)
Nice	(.79)	.12	.10	(.76)	.04	.18
Pleasant	(.83)	.10	.07	(.81)	.01	.02
Bright	.65	.45	.12	.48	.56	.01
Rough	.06	.41	(.53)	.03	.34	(.56)
Large	.30	(.68)	.06	.26	.48	.29
Black	.10	.18	(.52)	.20	.30	.40
Heavy	.05	.38	.41	.16	.16	.47
Hot	.02	(.64)	(.63)	.25	(.71)	.18
Thick	.21	(.72)	.18	.24	.53	.48
Fresh	.53	.42	.19	.43	.26	.13

APPENDIX E

Table E-1: Pre and Post Attitude Score
and Difference Score Means and Standard Deviations
by Sub-Concepts and Placement Group for Scale Hard-Soft

Sub-Concept	Placement	$\bar{X}$	Attitude Score		Difference
	Group	s	Pre	Post	Score
PUPIL	Culturally	$\bar{X}$	2.93	3.10	+0.17
	Similar	s	1.14	1.35	1.18
	Culturally	$\bar{X}$	3.28	3.48	+0.62
	Different	s	1.01	1.33	1.77
NEGRO PUPIL	Culturally	$\bar{X}$	2.73	4.30	+0.30
	Similar	s	2.03	1.54	1.70
	Culturally	$\bar{X}$	4.00	4.71	+0.71
	Different	s	1.10	1.23	1.23
GENERAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.57	4.37	-0.20
	Similar	s	1.16	1.07	1.19
	Culturally	$\bar{X}$	4.52	4.76	+0.24
	Different	s	1.36	1.00	1.00
PROFESSIONAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.83	4.93	+0.10
	Similar	s	1.32	1.05	1.27
	Culturally	$\bar{X}$	4.66	4.71	+0.05
	Different	s	1.20	1.10	1.40
SELF AS STUDENT	Culturally	$\bar{X}$	3.73	3.97	+0.23
	Similar	s	1.93	1.90	1.78
	Culturally	$\bar{X}$	3.24	4.00	+0.76
	Different	s	0.79	1.90	1.30
SELF AS TEACHER	Culturally	$\bar{X}$	4.33	4.33	0.00
	Similar	s	1.74	1.54	1.62
	Culturally	$\bar{X}$	4.05	4.76	+0.71
	Different	s	1.35	0.89	1.31

Table E-2: Pre and Post Attitude Score
and Difference Score Means and Standard Deviations
by Sub-Concepts and Placement Group for Scale Calm-Agitated

Sub-Concept	Placement	$\bar{X}$	Attitude Score		Difference
	Group	s	Pre	Post	Score
PUPIL	Culturally	$\bar{X}$	4.33	4.23	-0.10
	Similar	s	1.27	1.31	1.44
	Culturally	$\bar{X}$	4.38	4.09	-0.29
	Different	s	1.28	1.51	1.74
NEGRO PUPIL	Culturally	$\bar{X}$	3.97	3.60	-0.43
	Similar	s	1.24	1.28	1.16
	Culturally	$\bar{X}$	3.52	3.48	-0.05
	Different	s	1.33	1.33	1.83
GENERAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	3.63	4.27	+0.63
	Similar	s	1.56	1.46	1.73
	Culturally	$\bar{X}$	4.43	4.47	+0.05
	Different	s	1.16	1.29	1.46
PROFESSIONAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.13	4.52	+0.19
	Similar	s	1.50	1.03	1.50
	Culturally	$\bar{X}$	4.33	4.52	+0.19
	Different	s	1.35	0.98	1.62
SELF AS STUDENT	Culturally	$\bar{X}$	5.00	4.67	+0.33
	Similar	s	1.46	1.52	1.79
	Culturally	$\bar{X}$	5.19	4.90	-0.29
	Different	s	1.25	1.41	1.38
SELF AS TEACHER	Culturally	$\bar{X}$	5.43	5.27	-0.13
	Similar	s	1.16	1.20	1.47
	Culturally	$\bar{X}$	5.66	5.09	-0.57
	Different	s	1.02	1.09	1.12

Table E-3: Pre and Post Attitude Score
and Difference Score Means and Standard Deviations
by Sub-Concepts and Placement Group for Scale Loud-Soft

Sub-Concept	Placement	$\bar{X}$	Attitude Score		Difference
	Group	s	Pre	Post	Score
PUPIL	Culturally	$\bar{X}$	4.57	4.73	+0.17
	Similar	s	1.43	1.36	1.46
	Culturally	$\bar{X}$	4.86	5.05	+0.10
	Different	s	1.15	1.40	0.94
NEGRO PUPIL	Culturally	$\bar{X}$	4.50	4.93	+1.15
	Similar	s	1.11	1.05	1.07
	Culturally	$\bar{X}$	4.57	5.33	+0.76
	Different	s	1.12	1.02	1.22
GENERAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.34	4.20	-0.17
	Similar	s	1.00	0.92	1.21
	Culturally	$\bar{X}$	3.90	4.19	+0.24
	Different	s	0.62	0.81	1.02
PROFESSIONAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.63	4.37	-0.23
	Similar	s	1.10	0.85	1.18
	Culturally	$\bar{X}$	4.19	4.28	+0.10
	Different	s	0.81	1.01	1.04
SELF AS STUDENT	Culturally	$\bar{X}$	4.03	3.33	+0.43
	Similar	s	1.47	1.22	1.41
	Culturally	$\bar{X}$	3.33	3.86	+0.52
	Different	s	1.35	1.28	1.96
SELF AS TEACHER	Culturally	$\bar{X}$	3.97	4.23	+0.27
	Similar	s	1.33	1.30	1.17
	Culturally	$\bar{X}$	3.95	4.38	+0.43
	Different	s	1.02	1.20	1.21

Table E-4: Pre and Post Attitude Score
and Difference Score Means and Standard Deviations
by Sub-Concepts and Placement Groups for Scale Nice-Awful

Sub-Concept	Placement	$\bar{X}$	Attitude Score		Difference
	Group	s	Pre	Post	Score
PUPIL	Culturally	$\bar{X}$	6.39	6.09	-0.30
	Similar	s	0.77	0.99	0.84
	Culturally	$\bar{X}$	6.24	6.18	-0.15
	Different	s	0.70	0.81	0.59
NEGRO PUPIL	Culturally	$\bar{X}$	5.56	5.69	+0.13
	Similar	s	0.90	0.95	0.82
	Culturally	$\bar{X}$	6.00	5.86	-0.14
	Different	s	0.84	0.79	0.57
GENERAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.96	5.29	+0.33
	Similar	s	1.50	1.02	1.40
	Culturally	$\bar{X}$	5.19	5.05	-0.14
	Different	s	1.21	1.16	1.06
PROFESSIONAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.96	5.43	+0.47
	Similar	s	1.27	0.86	1.20
	Culturally	$\bar{X}$	5.00	5.09	+0.10
	Different	s	1.22	0.70	1.26
SELF AS STUDENT	Culturally	$\bar{X}$	5.79	5.83	+0.03
	Similar	s	0.89	0.95	0.89
	Culturally	$\bar{X}$	6.04	6.00	-0.05
	Different	s	0.74	0.71	0.50
SELF AS TEACHER	Culturally	$\bar{X}$	60.3	5.93	-0.10
	Similar	s	0.76	0.98	0.66
	Culturally	$\bar{X}$	6.09	6.04	-0.05
	Different	s	0.68	0.50	0.67

Table E-5: Pre and Post Attitude Score
and Difference Score Means and Standard Deviations
by Sub-Concepts and Placement Group for Scale Pleasant-Unpleasant

Sub-Concept	Placement	$\bar{X}$	Attitude Score		Difference
	Group	s	Pre	Post	Score
PUPIL	Culturally	$\bar{X}$	6.23	6.03	-0.20
	Similar	s	0.82	0.89	0.80
	Culturally	$\bar{X}$	6.28	6.52	+0.19
	Different	s	0.90	0.60	0.75
NEGRO PUPIL	Culturally	$\bar{X}$	5.05	5.53	+0.03
	Similar	s	0.86	1.01	1.07
	Culturally	$\bar{X}$	5.76	5.81	+0.05
	Different	s	1.14	0.81	1.02
GENERAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	5.40	5.37	-0.03
	Similar	s	1.43	1.07	1.43
	Culturally	$\bar{X}$	5.19	5.33	+0.14
	Different	s	1.78	1.20	1.49
PROFESSIONAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	5.07	5.50	+0.43
	Similar	s	1.41	1.20	1.25
	Culturally	$\bar{X}$	5.09	5.43	+0.29
	Different	s	1.68	1.08	1.35
SELF AS STUDENT	Culturally	$\bar{X}$	5.87	5.83	-0.03
	Similar	s	0.68	0.79	0.72
	Culturally	$\bar{X}$	6.04	6.19	+0.14
	Different	s	0.74	0.60	0.73
SELF AS TEACHER	Culturally	$\bar{X}$	6.23	6.00	-0.27
	Similar	s	0.68	0.83	0.76
	Culturally	$\bar{X}$	6.28	6.14	-0.14
	Different	s	0.46	0.48	0.57

Table E-6: Pre and Post Attitude Score
and Difference Score Means and Standard Deviations
by Sub-Concept and Placement Group for Scale Bright-Dark

Sub-Concept	Placement	$\bar{X}$	Attitude Score		Difference
	Group	s	Pre	Post	Score
PUPIL	Culturally	$\bar{X}$	5.59	5.66	+0.07
	Similar	s	1.07	1.03	1.08
	Culturally	$\bar{X}$	5.33	5.19	+0.10
	Different	s	1.16	1.87	1.04
NEGRO PUPIL	Culturally	$\bar{X}$	5.16	5.26	+0.10
	Similar	s	1.23	1.23	0.88
	Culturally	$\bar{X}$	5.28	4.86	-0.43
	Different	s	0.90	1.35	1.43
GENERAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.73	5.20	+0.47
	Similar	s	1.60	1.06	1.38
	Culturally	$\bar{X}$	4.81	4.62	-0.19
	Different	s	1.33	1.16	0.98
PROFESSIONAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.93	5.03	+0.10
	Similar	s	1.35	1.10	1.22
	Culturally	$\bar{X}$	4.71	4.71	0.00
	Different	s	1.35	1.10	1.22
SELF AS STUDENT	Culturally	$\bar{X}$	5.46	5.49	+0.03
	Similar	s	0.94	0.90	0.76
	Culturally	$\bar{X}$	5.38	5.81	+0.43
	Different	s	0.86	0.81	0.75
SELF AS TEACHER	Culturally	$\bar{X}$	5.96	5.63	-0.10
	Similar	s	0.95	0.85	0.90
	Culturally	$\bar{X}$	5.71	5.66	-0.05
	Different	s	0.94	0.86	0.97

**Table E-7: Pre and Post Attitude Score
and Difference Score Means and Standard Deviations
by Sub-Concepts and Placement Group for Scale Rough-Smooth**

Sub-Concept	Placement	$\bar{X}$	Attitude Score		Difference
	Group	s	Pre	Post	Score
PUPIL	Culturally	$\bar{X}$	3.76	4.16	+0.40
	Similar	s	1.33	1.51	1.71
	Culturally	$\bar{X}$	3.76	4.38	+0.62
	Different	s	1.14	0.97	1.32
NEGRO PUPIL	Culturally	$\bar{X}$	4.56	4.30	-0.27
	Similar	s	0.90	1.44	1.46
	Culturally	$\bar{X}$	4.33	4.81	+0.48
	Different	s	1.32	1.17	1.08
GENERAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.70	4.46	-0.23
	Similar	s	1.26	1.20	1.52
	Culturally	$\bar{X}$	4.57	4.43	-0.19
	Different	s	1.25	0.98	1.42
PROFESSIONAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.86	4.56	-0.30
	Similar	s	0.82	1.07	0.99
	Culturally	$\bar{X}$	4.47	4.33	-0.14
	Different	s	1.21	1.02	1.56
SELF AS STUDENT	Culturally	$\bar{X}$	3.28	3.24	-0.05
	Similar	s	0.96	1.14	1.11
	Culturally	$\bar{X}$	3.28	3.24	-0.05
	Different	s	0.90	0.77	1.02
SELF AS TEACHER	Culturally	$\bar{X}$	4.10	4.20	+0.13
	Similar	s	1.16	1.24	1.74
	Culturally	$\bar{X}$	3.81	3.81	0.00
	Different	s	1.03	1.36	1.84

Table E-8: Pre and Post Attitude Score
and Difference Score Means and Standard Deviations
by Sub-Concepts and Placement Group for Scale Large-Small

Sub-Concept	Placement	$\bar{X}$	Attitude Score		Difference
	Group	s	Pre	Post	Score
PUPIL	Culturally	$\bar{X}$	3.30	3.76	+0.43
	Similar	s	1.54	1.61	1.43
	Culturally	$\bar{X}$	3.38	3.57	+0.19
	Different	s	1.53	1.16	1.29
NEGRO PUPIL	Culturally	$\bar{X}$	4.20	4.50	+0.30
	Similar	s	1.06	1.46	1.46
	Culturally	$\bar{X}$	3.81	4.14	+0.33
	Different	s	1.25	1.11	1.16
GENERAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	5.07	5.07	0.00
	Similar	s	1.41	1.26	1.23
	Culturally	$\bar{X}$	5.00	5.00	0.00
	Different	s	1.48	1.34	1.61
PROFESSIONAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	5.40	5.00	-0.37
	Similar	s	1.13	1.20	1.17
	Culturally	$\bar{X}$	5.38	4.62	-0.76
	Different	s	1.47	1.63	1.86
SELF AS STUDENT	Culturally	$\bar{X}$	4.57	4.76	+0.26
	Similar	s	0.73	1.19	1.17
	Culturally	$\bar{X}$	4.28	4.63	+0.33
	Different	s	1.10	0.97	1.11
SELF AS TEACHER	Culturally	$\bar{X}$	4.60	4.70	+0.07
	Similar	s	0.89	1.12	0.96
	Culturally	$\bar{X}$	4.47	4.57	+0.10
	Different	s	1.21	1.12	1.28



Table E-9: Pre and Post Attitude Score
and Difference Score Means and Standard Deviations
by Sub-Concepts and Placement Group for Scale Black-White

Sub-Concept	Placement	$\bar{X}$	Attitude Score		Difference
	Group	s	Pre	Post	Score
PUPIL	Culturally	$\bar{X}$	3.33	3.20	-0.13
	Similar	s	0.88	1.13	1.25
	Culturally	$\bar{X}$	3.95	3.76	-0.19
	Different	s	1.07	1.18	0.93
NEGRO PUPIL	Culturally	$\bar{X}$	5.06	4.53	-0.53
	Similar	s	1.62	1.72	1.68
	Culturally	$\bar{X}$	5.28	4.86	-0.43
	Different	s	1.45	1.24	1.12
GENERAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	3.97	3.76	-0.20
	Similar	s	1.00	0.63	1.16
	Culturally	$\bar{X}$	4.05	3.81	-0.24
	Different	s	0.67	0.87	0.77
PROFESSIONAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.20	3.96	-0.23
	Similar	s	1.00	0.76	1.30
	Culturally	$\bar{X}$	4.05	3.90	-0.14
	Different	s	0.97	0.77	1.11
SELF AS STUDENT	Culturally	$\bar{X}$	2.93	3.03	+0.10
	Similar	s	1.74	1.30	1.52
	Culturally	$\bar{X}$	2.57	2.95	+0.38
	Different	s	1.40	1.43	1.58
SELF AS TEACHER	Culturally	$\bar{X}$	3.06	3.10	+0.03
	Similar	s	1.64	1.24	1.52
	Culturally	$\bar{X}$	3.38	3.24	-0.14
	Different	s	1.24	1.22	1.34

Table E-10: Pre and Post Attitude Score
and Difference Score Means and Standard Deviations
by Sub-Concepts and Placement Group for Scale Heavy-Light

Sub-Concept	Placement	$\bar{X}$	Attitude Score		Difference
	Group	s	Pre	Post	Score
PUPIL	Culturally	$\bar{X}$	3.00	3.70	+0.70
	Similar	s	1.08	0.95	0.95
	Culturally	$\bar{X}$	3.33	3.48	+0.14
	Different	s	1.20	1.17	1.49
NEGRO PUPIL	Culturally	$\bar{X}$	3.90	4.06	+0.17
	Similar	s	1.00	1.14	1.26
	Culturally	$\bar{X}$	3.66	4.14	+0.48
	Different	s	1.06	1.01	1.33
GENERAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.50	4.63	+0.10
	Similar	s	1.28	0.93	1.45
	Culturally	$\bar{X}$	4.14	4.47	+0.33
	Different	s	1.49	1.08	1.49
PROFESSIONAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.66	4.80	+0.03
	Similar	s	0.96	1.15	1.56
	Culturally	$\bar{X}$	4.05	4.28	+0.24
	Different	s	1.32	1.23	1.45
SELF AS STUDENT	Culturally	$\bar{X}$	3.76	4.10	+0.33
	Similar	s	1.33	1.21	1.18
	Culturally	$\bar{X}$	3.86	3.86	0.00
	Different	s	1.11	1.24	1.26
SELF AS TEACHER	Culturally	$\bar{X}$	4.30	4.16	-0.13
	Similar	s	1.15	1.05	0.90
	Culturally	$\bar{X}$	3.81	4.19	+0.38
	Different	s	1.03	1.21	1.36

Table E-11: Pre and Post Attitude Score
and Difference Score Means and Standard Deviations
by Sub-Concepts and Placement Group for Scale Hot-Cold

Sub-Concept	Placement	$\bar{X}$	Attitude Score		Difference
	Group	s	Pre	Post	Score
PUPIL	Culturally	$\bar{X}$	4.50	4.73	+0.23
	Similar	s	1.11	0.98	0.90
	Culturally	$\bar{X}$	4.62	4.56	-0.50
	Different	s	0.92	0.75	1.20
NEGRO PUPIL	Culturally	$\bar{X}$	4.33	4.70	+0.37
	Similar	s	0.96	1.02	0.67
	Culturally	$\bar{X}$	4.90	4.45	-0.48
	Different	s	1.04	0.93	1.36
GENERAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.33	4.40	+0.07
	Similar	s	0.99	0.97	0.94
	Culturally	$\bar{X}$	3.71	3.90	+0.19
	Different	s	1.01	1.00	0.87
PROFESSIONAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.13	4.20	+0.07
	Similar	s	0.82	0.66	1.20
	Culturally	$\bar{X}$	4.00	3.90	0.10
	Different	s	1.05	0.70	0.89
SELF AS STUDENT	Culturally	$\bar{X}$	4.40	4.70	+0.30
	Similar	s	0.77	0.92	0.99
	Culturally	$\bar{X}$	4.52	4.57	0.00
	Different	s	0.75	0.68	0.95
SELF AS TEACHER	Culturally	$\bar{X}$	4.50	4.70	+0.24
	Similar	s	0.86	0.99	0.71
	Culturally	$\bar{X}$	4.62	4.81	+0.24
	Different	s	0.74	0.87	0.83

Table E-12: Pre and Post Attitude Score
and Difference Score Means and Standard Deviations
by Sub-Concepts and Placement Group for Scale Thick-Thin

Sub-Concept	Placement	$\bar{X}$	Attitude Score		Difference
	Group	s	Pre	Post	Score
PUPIL	Culturally	$\bar{X}$	4.00	4.26	+0.27
	Similar	s	1.08	1.11	0.91
	Culturally	$\bar{X}$	4.28	4.28	0.00
	Different	s	0.56	1.19	1.00
NEGRO PUPIL	Culturally	$\bar{X}$	4.36	4.53	+0.17
	Similar	s	0.96	1.22	1.05
	Culturally	$\bar{X}$	4.52	4.38	-0.14
	Different	s	0.98	0.97	1.29
GENERAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.20	4.56	+0.37
	Similar	s	1.19	1.04	1.16
	Culturally	$\bar{X}$	4.00	4.24	+0.24
	Different	s	1.41	1.22	0.89
PROFESSIONAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.23	4.53	+0.23
	Similar	s	1.04	0.86	1.42
	Culturally	$\bar{X}$	3.86	4.28	+0.43
	Different	s	1.42	0.90	1.29
SELF AS STUDENT	Culturally	$\bar{X}$	4.56	4.70	+0.67
	Similar	s	1.04	1.15	1.04
	Culturally	$\bar{X}$	4.09	4.76	+0.67
	Different	s	1.09	0.94	1.20
SELF AS TEACHER	Culturally	$\bar{X}$	4.40	4.60	+0.20
	Similar	s	1.04	0.93	0.96
	Culturally	$\bar{X}$	4.47	4.43	-0.05
	Different	s	1.08	0.81	1.24

**Table E-13: Pre and Post Attitude Score
and Difference Score Means and Standard Deviations
by Sub-Concepts and Placement Group for Scale Fresh-State**

Sub-Concept	Placement	$\bar{X}$	Attitude Score		Difference
	Group	s	Pre	Post	Score
PUPIL	Culturally	$\bar{X}$	6.03	5.93	-0.10
	Similar	s	0.93	0.98	0.96

	Culturally	$\bar{X}$	6.00	6.09	+0.10
	Different	s	0.89	0.77	0.83
NEGRO PUPIL	Culturally	$\bar{X}$	5.06	5.33	+0.27
	Similar	s	0.91	1.09	1.05

	Culturally	$\bar{X}$	5.00	4.90	-0.10
	Different	s	1.05	0.94	1.00
GENERAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.63	4.83	+0.20
	Similar	s	1.24	1.12	1.13

	Culturally	$\bar{X}$	4.76	4.43	-0.33
	Different	s	1.45	1.50	1.65
PROFESSIONAL ACADEMIC PREPARATION	Culturally	$\bar{X}$	4.79	5.10	+0.27
	Similar	s	1.06	1.12	1.39

	Culturally	$\bar{X}$	4.52	4.66	+0.14
	Different	s	1.44	1.35	1.28
SELF AS STUDENT	Culturally	$\bar{X}$	5.69	5.49	-0.20
	Similar	s	0.92	0.97	1.80

	Culturally	$\bar{X}$	5.57	5.71	+0.14
	Different	s	0.81	0.84	1.01
SELF AS TEACHER	Culturally	$\bar{X}$	5.93	5.69	-0.23
	Similar	s	0.78	0.99	0.88

	Culturally	$\bar{X}$	6.00	5.76	-0.24
	Different	s	0.89	1.09	1.14



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