UTILIZATION OF THE DRAW-A-TEACHER TECHNIQUE IN STUDYING SELECTED DIMENSIONS IN TEACHER EDUCATION

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ABSTRACT

UTILIZATION OF THE DRAW-A-TEACHER TECHNIQUE IN STUDYING SELECTED DIMENSIONS IN TEACHER EDUCATION

by Thomas Van Doorn Telder

Statement of the Problem

The purpose of this study was to gather quantitative data from the drawings of different groups of students enrolled in the Student-Teacher Education Program (STEP) at Michigan State University. The investigation analyzed the drawing specimens of these students in order to look at the attitudinal differences projected by various groups upon entering STEP and the changes which occurred within the same group during the teacher preparation program.

Procedures and Findings

The basic data for this study were elicited from the Draw-A-Teacher instrument developed by Travers and Rabinowitz.[1] This technique provided STEP students with a blank sheet of paper upon which they were instructed to draw a teacher with a class. It was felt that data from the present study in addition to data obtained from previous research with this technique might, over time, contribute to the prediction of a teacher's behavior in the classroom if pertinent information for studying certain selected

dimensions of teacher education could be elicited from the drawing representations. The five dimensions which were believed to be relevant to classroom behavior were developed in an earlier study for the Draw-A-Teacher instrument by Mitzel, Ostreicher, and Reiter.[2] These dimensions are (1) Relative Teacher Emphasis, (2) Teacher Initiative, (3) Psychological Distance, (4) Traditionalism in Classroom Arrangement, and (5) Artistic Quality.

Three judges from common professional backgrounds were selected by the writer for each of the five dimensions under study. Each set of three judges compared the 212 specimen drawings for one of the five dimensions. As a replication of the procedure utilized by Mitzel, et al., an adaptation of Hoyt's analysis of variance procedures was applied to determine the reliability of the judges on each of the five dimensions. Through this process it was established that there was a high degree of consistency between the judges who scored the attitudinal dimensions under study.

In order to test the significance of the difference between the entry drawings of students who completed STEP (persistors), those who dropped out voluntarily, and those who dropped out at the request of the program coordinator, analysis of variance procedures were utilized. This statistical analysis determined that there were no significant differences between the entry drawings of these various groups.

A correlated "t" test was applied to determine the significance of the difference between the ratings of the entry and exit drawings of persistors. The results of this analysis indicated that the entry and exit drawings were significantly different from each other with regard to the five dimensions.

In order to explore the possible causes for the striking differences which occurred between the entry and exit drawings, the investigator compared the group which manifested the greatest shift away from traditionalism to the group which manifested the least shift from traditionalism with regard to the variables of age, sex, ability, grade-level assignment, and type of school assignment. The chi-square tests of these two groups produced no statistically significant data.

Recommendations

Although the findings of this investigation show that differences exist in the repeated drawings of prospective teachers, research is needed to determine what specific aspects of the preparation program are related to these differences.

The Draw-A-Teacher technique is a fascinating, unique, and valuable projective instrument which, it is felt, could become useful in predicting the behavior of a teacher in a classroom. Therefore, a final overall recommendation would

be that the technique be experimented with and utilized in various ways in order to further the refinement, standardization, and usefulness of the instrument.

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[1]Robert M. W. Travers and William Rabinowitz, "A Drawing Technique for Studying Certain Outcomes of Teacher Education," Exploratory Studies in Teacher Personality, Research Publication 14 (New York: College of the City of New York, Division of Teacher Education, Office of Research and Evaluation, 1953).

[2]Harold E. Mitzel, Leonard M. Ostreicher, and Sidney R. Reiter, Development of Attitudinal Dimensions from Teachers' Drawings, Research Publication 24 (New York: College of the City of New York, Division of Teacher Education, Office of Research and Evaluation, 1954).

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To my wife, Glenna, and our daughters, Sara, Kathryn, and Lisa, without whose encouragement, understanding and assistance this study would not have been possible.

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CHAPTER I

THE PROBLEM

Introduction

From 1958-1964 the College of Education at Michigan State University was engaged in an experimental teacher education preparation program for teachers of grades Kindergarten through eight. The Student-Teacher Education Program (STEP) was unique in that it provided for two years of intern teaching in a public school setting. This internship phase of teacher preparation incorporated a concommitant professional education sequence geared to experiences in the classroom along with the maintenance of a strong liberal arts requirement.

Students, who had completed two years of liberal arts and general education course work at a community college, were selected for the Student-Teacher Education Program by the Resident Coordinator, a Michigan State University faculty member in residence in the cooperating center. Following personal interviews and the administration of a battery of tests, the students enrolled for a ten-week summer session at Michigan State University with course work being selected from liberal arts offerings.

In the fall of their third year of preparation, students returned to the cooperating center for a year of

professional study. During the first two-thirds of this year, formal study in the methods of teaching and in educational psychology and sociology was combined with work in the schools as an unpaid Associate Teacher under the direction of the Supervising Teacher and the Resident Coordinator. In the final third of this year students completed a full-time student teaching experience. Again, students returned to a five-week summer session on-campus for further course work in arts and sciences.

In the fourth and fifth years, the intern was assigned to a regular teaching station and was expected to meet the obligations of any other beginning teacher. During the fourth year, an "Intern Consultant" devoted full time to the in-service training of five interns. The intern received payment of approximately two-thirds the salary of a regular beginning teacher. The University also offered the intern teachers one course a term during this fourth year.

Following another five-week summer session on-campus, the intern returned to his teaching assignment under the guidance of an Intern Consultant and received a salary of approximately three-fourths that of a beginning teacher. The ratio of interns to consultants for this year was approximately ten to one. At the end of this fifth year of preparation the formal course work was completed and the students were tested and interviewed for the final time before qualifying for their Bachelor's Degree and Elementary Provisional Teaching Certificate.

Related to the operation and administration of STEP was a research program in which specialists were engaged in studying the factors that influence the socialization process in teacher education. One of the many instruments utilized in collecting data for the research program was the Draw-A-Teacher technique developed by Travers and Rabinowitz. STEP students were provided with a blank sheet of 8½ x 11-inch paper, the top of which was printed with the following directions:

> In the space below draw a picture of a teacher with a class. Draw as complete a picture as you can. Avoid the use of stick figures. Don't worry about your artistic ability or lack of it; just draw as well as you can.[1]

This study deals with the Draw-A-Teacher technique as utilized in STEP research.

Rationale for the Study

STEP, if it is deemed to be an effective teacher preparation program, should have developed new patterns of teacher behavior in the classroom or at least have modified or enriched old patterns. Furthermore, it should have aided the student in developing whatever mechanisms are necessary

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[1] Robert M. W. Travers and William Rabinowitz, "A Drawing Technique for Studying Certain Outcomes of Teacher Education," Exploratory Studies in Teacher Personality, Research Publication 14 (New York: College of the City of New York, Division of Teacher Education, Office of Research and Evaluation, 1953), pp. 19-40.

for him to function in an appropriate manner when he eventually faces a class. This follows a fundamental assumption of Shaplin who attempted to justify practice as a part of the preparation of teachers. Shaplin says:

> Teaching is behavior, and as behavior is subject to analysis, change, and improvement. The concept of improvement implies that there are controlling objectives in teaching, and that the behaviors of teaching are organized to accomplish these objectives. A large part of teaching is the result of a conscious process of controlling behavior to accomplish certain purposes. The assumption is also made here that practice conditions can be established which will provide the kind of analysis of teaching which will enable the teacher to learn to control his behavior. . . .
>
> If teaching behavior is to be analyzed, evaluated, and improved, we need systematic criteria for analysis, and standards for teaching behavior which are consistent with the objectives of education and the essentials of learning.[2]

The fundamental purpose of this investigation was to analyze the Draw-A-Teacher specimens completed by STEP students in order to extract quantitative data regarding attitudinal differences of various groups upon entering STEP, and regarding changes occurring as a function of certain experiences during the teacher preparation program. The rationale underlying the technique itself best describes the purpose for this investigation. Travers and Rabinowitz in discussing this technique have stated:

> If a person is asked to draw a teacher in a class, or to draw a policeman directing traffic, or to draw

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[2] J. T. Shaplin, "Practice in Teaching," The Harvard Review, 31 (Winter, 1961), p. 33.

> a foreman supervising a road gang, he does not produce a drawing out of a vacuum. The drawings inevitably display some of the ideas he has acquired concerning what these individuals do in these particular situations. This knowledge may be objectively correct or it may be distorted, but that is of no immediate consequence. In a picture of this kind individuals do project their impressions concerning how they think a person might act in the situation specified. Without such projection there could be no drawing. We are not saying that the person who produces a drawing does not exercise some conscious selection over the ideas he presents. In most cases, there undoubtedly is some conscious selection of ideas. However, we have found that the individuals who perform this simple test do not usually appreciate the fact that they reveal their own highly personal ideas about the persons and situations presented.[3]

Scope and Limitations

Based on the theoretical structure of the studies of Travers and Rabinowitz, Mitzel, Ostreicher, and Reiter felt that the Draw-A-Teacher technique would best contribute to the prediction of a teacher's behavior if a set of objectively scored dimensions could be developed for the drawings.[4] From many possibilities Mitzel, et al. developed a total of five dimensions which they believed to be relevant to classroom behavior. These five dimensions are:

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[3]Travers and Rabinowitz, op. cit., p. 19.

[4]Harold E. Mitzel, Leonard M. Ostreicher, and Sidney R. Reiter, Development of Attitudinal Dimensions from Teachers' Drawings, Research Publication 24 (New York: College of the city of New York, Division of Teacher Education, Office of Research and Evaluation, 1954), passim.

(1) Relative Teacher Emphasis, (2) Teacher Initiative, (3) Psychological Distance, (4) Traditionalism in Classroom Arrangement, and (5) Artistic Quality.[5]

Based on these dimensions this study attempted to analyze the drawings of different groups of STEP students in order to explore further the usefulness of the Draw-A-Teacher technique and to extract pertinent data for studying certain aspects of teacher education such as the attitudes or behavioral patterns of teaching interns. For this study, three groups were identified for purposes of analysis. The population selected included the 206 drawings of eighty-three STEP students for whom both an entry and exit drawing were available (persistors), twenty-four students who voluntarily dropped out of STEP, and sixteen students who dropped out of STEP upon the recommendation of the Resident STEP Coordinator.

A set of three judges compared the specimen drawings of these different groups of STEP students with the scaled sample drawings which were developed by Mitzel, et al. for use with the Draw-A-Teacher instrument. Then, in order to make a comparison of the score shifts on the five dimensions, the mean ratings of the entry drawings of STEP persistors, voluntary dropouts, and involuntary dropouts were plotted on a graph for each of the dimensions. Following

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[5] Ibid.

this step a "t" test was applied to determine the significance of the difference between the mean ratings of the different groups of drawings.

Although related literature and past use of the Draw-A-Teacher technique has shown it may be a predictor of a teacher's actual classroom behavior, no attempt was made in the present study to substantiate or refute this contention through the exclusive use of this drawing instrument. Furthermore, analyses of the drawings for this study did not involve any clinical, psychoanalytic examination.

Definition of Terms

Dimensions.--The following five dimensions are based on the meaning ascribed to them by Mitzel, et al.

Relative Teacher Emphasis.--The degree of relative importance with which the artist views the teacher figure in relationship to the pupil figures.

Teacher Initiative.--The extent to which the artist presents schoolroom activities as being teacher initiated, teacher sponsored, or teacher controlled. In other words, the degree of control that the teacher figure is exerting over the depicted classroom activity.

Psychological Distance.--The interpersonal relationship existing between the teacher figure and pupil

figures depicted in the drawings. This would take into account barriers which may separate the teacher from members of the class and the accessibility of the teacher to the pupils.

Traditionalism in Classroom Arrangement.--The variance of classroom arrangement from "modern" to "traditional" in the educational sense. This takes into account pupil grouping, pupil seating, reliance on furniture, and special interest areas in the classroom.

Artistic Quality.--The extent to which "ability to draw" influences the meaning of the drawings. This dimension was added as an attempt to provide a "control" variable for the other four dimensions.[6]

Scaled sample drawings.--The graded facsimiles of the five sets of sample drawings used by the judges to place numerical values on the drawings for each dimension (Appendix A).

Entry drawings.--Drawings which were completed by students upon entry into the Student-Teacher Education Program.

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[6] Ibid.

Exit drawings.--Drawings which were completed by students upon completion of the Student-Teacher Education Program.

STEP student.--A student who enrolled in the Student-Teacher Education Program.

Persistor.--A STEP student for whom both an entry and exit drawing were available.

Voluntary dropout.--A STEP student who withdrew from the program at his own request.

Involuntary dropout.--A STEP student who withdrew from the program at the request of the STEP Resident Co-ordinator.

Testable Hypotheses

I. Relative Teacher Emphasis Dimension

IA. The mean rating of the entry drawings of voluntary STEP dropouts and involuntary STEP dropouts will be equal to the mean rating of the entry drawings of STEP persistors with regard to the Relative Teacher Emphasis dimension.

IB. The mean rating of the entry drawings of STEP persistors will be higher than the mean rating of the exit drawings of STEP persistors with regard to the Relative Teacher Emphasis dimension.

II. Teacher Initiative Dimension

IIA. The mean rating of the entry drawings of voluntary STEP dropouts and involuntary STEP dropouts will be equal to the mean rating of the entry drawings of STEP persistors with regard to the Teacher Initiative dimension.

IIB. The mean rating of the entry drawings of STEP persistors will be higher than the mean rating of the exit drawings of STEP persistors with regard to the Teacher Initiative dimension.

III. Psychological Distance Dimension

IIIA. The mean rating of the entry drawings of voluntary STEP dropouts and involuntary STEP dropouts will be equal to the mean rating of the entry drawings of STEP persistors with regard to the Psychological Distance dimension.

IIIB. The mean rating of the entry drawings of STEP persistors will be higher than the mean rating of the exit drawings of STEP persistors with regard to the Psychological Distance dimension.

IV. Traditionalism in Classroom Arrangement Dimension

IVA. The mean rating of the entry drawings of voluntary STEP dropouts and involuntary STEP dropouts

will be equal to the mean rating of the entry drawings of STEP persistors with regard to the Traditionalism in Classroom Arrangement dimension.

IVB. The mean rating of the entry drawings of STEP persistors will be higher than the mean rating of the exit drawings of STEP persistors with regard to the Traditionalism in Classroom Arrangement dimension.

V. Artistic Quality Dimension

VA. The mean rating of the entry drawings of voluntary STEP dropouts and involuntary STEP dropouts will be equal to the mean rating of the entry drawings of STEP persistors with regard to the Artistic Quality dimension.

VB. The mean rating of the entry drawings of STEP persistors will be equal to the mean rating of the exit drawings of STEP persistors with regard to the Artistic Quality dimension.

A summary of the foregoing hypotheses indicates that no significant differences will be noted between the entry drawings of STEP persistors, voluntary dropouts, and involuntary dropouts with regard to all five of the dimensions. Furthermore, this study is expected to show that significant

differences will occur between the entry drawings of STEP persistors and their exit drawings. It is hypothesized that the mean rating of the entry drawings of STEP persistors will be higher than the mean rating of their exit drawings with regard to Relative Teacher Emphasis, Teacher Initiative, Psychological Distance, and Traditionalism in Classroom Arrangement. No significant difference is anticipated between the entry and exit drawings of STEP persistors with regard to Artistic Quality.

CHAPTER II

RELATED LITERATURE

Introduction

There is a growing amount of literature on interpretation of drawings in the assessment of the human personality. Numerous devices and procedures have been developed in an attempt to measure important dimensions of personality which in turn are assumed to be predictive of behavior. Getzels states that:

> The personality of the teacher is a significant variable in the classroom. The educational impact of a teacher is not due solely to what he knows, or even to what he does, but in a very real sense to what he is. There has always been a concern with the personal qualities of teachers, and recently this concern has become the basis for much research.[1]

Of the many questionnaires, tests, scales, and other devices which have been developed over the years, no technique has generated more fascination and interest than the so-called "projective" instruments. Tests carrying this label require the subject to bring structure to an

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[1] J. W. Getzels and P. W. Jackson, "The Teacher's Personality and Characteristics," Handbook of Research on Teaching, ed. N. L. Gage (Chicago: Rand McNally & Co., 1963), p. 506.

unstructured test stimulus. The assumption is made that in attempting a meaningful response, the subject will produce a drawing that is a projection of himself. Evidence of this projection was noted by Travers and Rabinowitz in their initial study employing the use of the drawing technique:

> An aspect of projection which is particularly striking is the fact that in his drawing a student often portrays a teacher who actually looks like himself. A tall teacher is drawn most often by a tall student. Heavy students are likely to draw heavy teachers. The age and sex of the drawer are almost always reflected directly in the drawings. These evidences of projection are most discernible when physical similarities are the object of study. However, projection is not limited to the body image, but extends to a great host of attitudes and conceptions which the student holds.[2]

Sargent also has some basic assumptions concerning projective tests:

> A projective test is based on the theory that (1) when a subject is confronted with a neutral, ambiguous, stimulus (2) which requires a response, (3) he will react in terms of his own individual personality, and therefore it may be assumed that (4) whatever meanings he finds are his own, and hence are highly revealing of his personal characteristics and experiences. Furtheremore, since (5) the subject is unaware of the purpose of the experiment, and cannot detect the factors on which he will be scored, results are less apt to be distorted by an effort to choose "right" answers. Finally, not only the content, but (6) the manner and forms in which he perceives and organizes the material, his selective responses to parts of the

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[2]Travers and Rabinowitz, op. cit., p. 19.

> situation, and his voluntary and involuntary ways of expressing himself may all be regarded as potentially worthy of study.[3]

Research has shown that these projective means of appraisal do provide a rich source for the psychological interpretation of personality structure, even though they may not compare well with conventional tests which have been found to be valid and reliable.

In this study we are concerned with the analysis of the measurement scales developed for teachers' drawings with which to infer an aspect of the personalities of prospective teachers--their attitudes toward children, their concept of the teaching role, and the changes which have occurred during the teacher preparation program. It is believed that these attitudes and concepts are related to how a teacher performs in the classroom.

It is necessary to become aware of some of the research related to (1) patterns of teacher behavior or teacher role, (2) change as a result of educational experience, and finally (3) the rationale for use of the drawing technique, in order to show how the Draw-A-Teacher technique may provide a theoretical framework and starting point from which the researcher might reasonably proceed to certain propositions regarding teacher behavior.

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[3]Helen Sargent, "Projective Methods," An Experimental Application of Projective Principles to a Paper and Pencil Personality Test, American Psychological Association, Inc. (Evanston: Northwestern University, 1944), p. 2.

Patterns of Teaching Behavior

As Shaplin so aptly noted in his article entitled Practice in Teaching:

> Teaching is behavior, and as behavior is subject to analysis, change, and improvement. . . . Individuals vary greatly in their talent for teaching, the extent to which they behave in ways appropriate to teaching, or their readiness to adapt their behavior to appropriate directions. . . .
>
> The assumption is made that human beings are creatures of habit, that much of recurrent human behavior is conducted at unconscious or preconscious levels of awareness, and that most individuals do not make sophisticated analyses of shifting expectations as they move from role to role.
>
> Practice must be organized to be able to handle this kind of analysis, and we need a systematic analysis of the role of the teacher in the schools, and criteria for evaluating the appropriateness of behavior in this role.[4]

Researchers have devoted much time to study of the patterns of teacher behavior and the effect of this behavior on the learning process. Wallen and Travers point out, however, that most of the attempts to describe and discuss patterns of teacher behavior have been somewhat limited to such areas as permissive vs. authoritarian behavior, project method vs. subject-matter method of learning, etc., but that more recent literature generally refers to classification of teacher behavior through use of the term "role." Wallen and Travers report that in education, teacher role is simply a pattern of behavior shared by a group of

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[4]Shaplin, op. cit., p. 33.

teachers which is identifiable and related to the learning process.[5]

Wallen and Travers attempted to group these patterns of behavior in terms of their origin. They described them as:

1. Patterns derived from teaching traditions. (Illustration: A teacher teaches as he is taught.)
2. Patterns derived from social learnings in the teacher's background. (Illustration: A teacher reinforces the behavior so as to develop a middle-class ideology.)
3. Patterns derived from philosophical traditions. (Illustration: A teacher teaches in accordance with the Froebel or Rousseau tradition.)
4. Patterns generated by the teacher's own needs. (Illustration: A teacher adopts a lecture method because he needs to be self-assertive.)
5. Patterns generated by conditions existing in the school and community. (Illustration: A teacher conducts his classroom in such a way as to produce formal and highly disciplined behavior because this represents the pattern required by the principal.)
6. Patterns derived from scientific research on learning.[6]

Ryans also comments on the origin of teacher behavior patterns when he says that:

> Teacher behavior is a function of personal characteristics of the individual teacher. Teacher

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[5]N. E. Wallen and R. M. W. Travers, "Analysis and Investigation of Teaching Methods," Handbook of Research on Teaching, ed. N. L. Gage (Chicago: Rand McNally & Co., 1963), pp. 448-505.

[6]Ibid., p. 453.

> behavior is determined in part by the teacher's personal and social characteristics (e.g., in the intellectual, emotional, temperamental, attitudinal, and interest domains), which have their sources in both the genetic (unlearned) and experiential (learned) backgrounds of the individual. Knowledge of such characteristics contributes to prediction, within limits, of teacher behavior.[7]

Much research is needed in the pursuit of increased knowledge concerning teacher behavior. One of the several recommendations made by Ryans involved:

> . . . making studies of the influence of different kinds of teacher education programs, education courses, course content, practice teaching, and educational experiences on developing patterns of teacher characteristics, particularly teacher behaviors X (understanding, friendly, classroom behavior), Y (responsible, businesslike classroom behavior), and Z (stimulating, imaginative classroom behavior).[8]

In discussing the dimensionalization of classroom behavior, Medley and Mitzel state that:

> Progress in the development of scientific knowledge about teaching behavior awaits the development of a set of such dimensions, which are educationally and scientifically significant, so that a substantial portion of the differences between different classrooms can be described quantitatively and related to other variables.[9]

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[7]David G. Ryans, Characteristics of Teachers (Washington: American Council of Education, 1960), p. 21.

[8]Ibid., p. 399.

[9]Donald M. Medley and Harold E. Mitzel, "Measuring Classroom Behavior by Systematic Observation," Handbook of Research on Teaching, ed. N. L. Gage (Chicago: Rand McNally & Co., 1963), p. 308.

Although the studies involving patterns of teaching behavior often center on observation of actual behavior in the classroom, the importance of value judgments in determining certain dimensions of teacher behavior should not be overlooked.

Change As a Result of Educational Experience

A research study utilizing data from a teacher preparation program would be remiss in not addressing itself to "change" as a result of an educational experience for the modification of teacher attitudes in a desired direction is the objective of most teacher preparation programs. For example, the internship phase of the Student-Teacher Education Program was designed to give prospective teachers an opportunity to examine their attitudes, expectations, and practices with regard to the many roles or expected patterns of behavior of the teacher. This concern for change is perpetuated in much of the literature of the behavioral sciences today. Bradford states that "the major target of education is change and growth in the individual and his behavior."[10] Charters refers to the expected changes in student teacher behavior as a consequence of the induction process when he states that "the teacher's participation in the system of

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[10]L. Bradford, "The Teaching-learning Transaction," Adult Education, 8 (1958), p. 135.

social relationships which comprise the training institutions and programs 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."[11] Charters goes on to say 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."[12]

A similar point of view is suggested by Woodruff and Di Vesta when they state that "the student teacher, as a neophyte during the induction process into the teaching profession, is expected to modify his behavior to conform to the norms of 'teacher' and this behavior requires change in the concepts and values of the student."[13] Hicks and Walker base the justification for full-time student teaching on the premise that a student finds out, "by living

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[11] W. W. Charters, Jr., "The Social Background of Teaching," Handbook of Research on Teaching, ed. N. L. Gage (Chicago: Rand McNally & Co., 1963), p. 749.

[12] Ibid.

[13] A. D. Woodruff and F. J. Di Vesta, "The Relationship Between Values, Concepts, and Attitudes," Educational and Psychological Measurement, 8 (Winter, 1948), p. 649.

the life of a teacher, just what the job of teacher is, . . . the factors which shape your attitudes toward people, and especially toward children, contribute much in determining your success in teaching."[14]

In the early 1950's Grambs did not feel that there was much opportunity for those interested in becoming teachers to avoid the culture's concept of the teacher's role because of a lack of informal teaching experiences. She states:

> The future teacher in our society learns to view the teacher's role from a negative cultural viewpoint and is, typically, prevented from obtaining any genuine insight into the teaching function. Since our culture makes it so difficult to learn the teacher role with ambivalent and negative attitudes, only those few persons who escape this cultural conditioning through informal teaching relationships and leadership positions can move easily into teaching.[15]

An attempt is made to modify a student's patterns of behavior in some direction considered appropriate by those in charge of the program from the time he enters a teacher preparation program. Learning can be thought of as change due to experience. How effective the learning process has been will depend on the amount of change that

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[14]William V. Hicks and Clare C. Walker, Full-Time Student Teaching (East Lansing: Michigan State University Press, 1957), p. 1.

[15]Jean D. Grambs, "The Sociology of the 'Born Teacher'," Journal of Educational Sociology, 25 (May, 1952), p. 539.

has taken place in an individual or the number of students who have made significant changes in one or more of the dimensions related to the learning process. This change, of course, is measured in terms of the philosophy of those directing the program.

Tyler points out that education may be regarded as a system of learning experiences which bring about certain desirable changes in students and requires that teachers (and perhaps learners) be clear about--the educational objectives or goals of the learning process.[16]

Bloom developed a theoretical framework of learning and educational experiences based on Tyler's concept of education and the learning process as follows:

> From this conception of education and learning, students are seen as coming to the learning process, course, or instruction with particular aptitudes, abilities, and previous achievement. As a result of participating in particular learning experiences, the students are altered, and the degree to which they are altered is theoretically measureable by appraising the extent to which, at the end of the experiences, they have changed from what they were at the beginning of the experiences. . . .
>
> Educational experiences have a special character, as contrasted with life experiences in that they are selected and planned by one person with a view to their impact upon the learning of another. Educational experiences, as planned in the schools, are intended to have more intense and

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[16] R. W. Tyler, "Achievement Testing and Curriculum Construction," Trends in Student Personnel Work, ed. E. G. Williamson (Minneapolis: University of Minnesota Press, 1949), pp. 391-407.

> powerful effect than ordinary life experiences in changing the individual in a given direction. . . . If each educational experience is to have its desired effect, it must be selected or devised with a view to its appropriateness to an individual or to a group of learners; . . . learning experiences have been considered effective when they bring about changes in students. Thus it becomes important to determine by systematic procedures whether learners have been altered by a set of learning experiences. Have all learners been affected or have only certain learners or types of learners been affected? How much effect has taken place--how much change can be determined?[17]

A laboratory for teaching must be made available for the neophyte in order for change to take place through a set of educational experiences. In his paper Operational Competence in Student Teaching, Rex suggests that "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."[18]

Even though the classroom can provide this laboratory of "life-like, on-the-job" learning experiences for the teacher-trainee, it is necessary to become aware of certain

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[17]Benjamin S. Bloom, "Testing Cognitive Behavior," Handbook of Research on Teaching, ed. N. L. Gage (Chicago: Rand McNally & Co., 1963), pp. 386-387.

[18]R. G. Rex, "Operational Competence in Student Teaching" (unpublished paper, College of Education, Michigan State University, date 1962).

facts relevant to behavior change which have special significance for the laboratory method of teaching. Sasman notes these facts concerning behavior change in the following list:

1. Desirable behavior change is dependent upon removal of the social conditions responsible for undesirable behavior.
2. Behavior modification requires change in concepts and values.
3. Feelings significantly influence behavior change.
4. Behavior change is dependent upon social support.[19]

In view of increased research on the subject of behavior change, Sasman goes on to list some of the promising directions which are indicated for the laboratory method of teaching:

1. The development of laboratory situations in which co-operative group activity strengthens social support for desired behavior change. . . .
   The laboratory should be so set up that there will be opportunity for practice of desired behavior.
   The laboratory should provide opportunity for broadening contacts with people of different backgrounds in a variety of situations which require co-operation.
   The laboratory should provide experiences in which individuals, working with others on a common task, are exposed to the inconsistency of invalidity of their existing attitudes.
2. Increased personal involvement in laboratory situations. . . .
   The laboratory should be organized around the personally significant problems of the learner.

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[19]Erwin H. Sasman, "Do Laboratory and Field Experiences Change Behavior," Phi Delta Kappan, XXXIX, 12 (March, 1958), pp. 265-267.

> Laboratory activity should be designed to release the learner from personal insecurity and tension.
>
> Personal involvement should encompass the cooperative selection of problems, planning for their solution, fact collecting, decision making, and decision implementation.

3. Improved conditions for the development of meaning. . . .

> The laboratory should provide opportunity for direct experience with people and things and processes--as opposed only to verbal symbols or words about them--about which reliable knowledge is to be established.
>
> The laboratory should provide guided experience in the interpretation of people's doings and of the things and processes in the community.[20]

Rationale for Use of the Drawing Technique

As the writer has attempted to show in reviewing some of the important literature related to this study, patterns of classroom behavior are relevant to the personality of the teacher. Further study has indicated that certain educational experiences attempt to produce change in classroom behavior in an appropriate direction. The development of these two concepts form the base for the rationale for use of the drawing technique as one instrument in the prediction of attitude change. The primary use foreseen for these gross attitude measures lies in their potential contribution to the prediction of teachers' classroom behavior. The researchers utilizing this technique "have found it to

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[20] *Ibid.*

be much less susceptible to faking than conventional attitude inventories because it is relatively unstructured."[21]

Machover attempted to outline a method of personality analysis based upon interpretations of drawings of the human figure. She recognized from her depth analysis that individuals reveal important aspects of their personality in drawing. However, what has been lacking in drawing analysis, according to Machover, is "a degree of systematization of analysis of the graphic product which is at once comprehensive, communicable, and does justice to the intricacies of personality."[22]

Of the theoretical considerations concerning the phenomenon of projection Machover says:

> Personality, we know, does not develop in a vacuum but through the movement, feeling, and thinking of a specific body. Projective methods of exploring motivations have repeatedly uncovered deep and perhaps unconscious determinants of self-expression which could not be made manifest in direct communication. . . . Wide and concentrated experience with drawings of the human figure indicates an intimate tie-up between the figure drawn and the personality of the individual who is doing the drawing.

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[21]Harold E. Mitzel and Others, Studies of Teacher Behavior: Descriptive Notes on a Sample of Student Teachers, Research Publication 27 (New York: College of the City of New York, Division of Teacher Education, Office of Research and Evaluation, 1955), p. 7.

[22]Karen Machover, Personality Projection in the Drawing of the Human Figure (Springfield: Charles C. Thomas, 1949), p. 4.

> When an individual attempts to solve the problem of the directive to "draw a person" he is compelled to draw from some sources. . . . The individual must draw consciously and no doubt unconsciously upon his whole system of psychic values. . . . Most drawings contain elements of self-evaluation in both direct and compensated forms of projection and of both conscious and unconscious phases of self-revelation. . . . The predominantly psychological and functional focus of graphic projection is the basic rationale for drawing analysis.[23]

Even after years of experience with drawings, Machover is still "enormously impressed with what people manage to communicate in drawings, regardless of skill or previous training. Prognostic indicators may be more firmly established by systematically obtaining drawings at crucial points in the course of treatment."[24]

Based upon the studies of Machover, as well as those of Albee and Hamlin[25] and Anastasi and Foley[26] who have studied the use of figure drawings in a variety of situations, Travers and Rabinowitz introduced the Draw-A-Teacher technique in a study of teacher personality at City University

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[23] Ibid., pp. 4-10.

[24] Ibid., p. 25.

[25] G. W. Albee and R. M. Hamlin, "Judgment of Adjustment from Drawings: The Applicability of Rating Scale Methods," Journal of Clinical Psychology, 6 (1950), pp. 363-365.

[26] A Anastasi and J. P. Foley, Jr., "Psychiatric Selection of Flying Personnel: V. The Human-figure Drawing Test as an Objective Psychiatric Screening Aid for Student Pilots," U. S. Air Force, School of Aviation Medicine, Project Report 5 (No. 21-37-002, 1952).

of New York.[27] This technique requires students to draw a picture of a teacher with a class. In their first study the researchers found extreme variability in the drawings. Utilizing the case study technique, they attempted to show that changes in the drawing of an individual student coincided with changes in interview material obtained at various stages of teacher preparation. The purpose of this initial study was "only to present the technique and to discuss some of its potentialities."[28]

In a second study Travers and Rabinowitz examined more intensively, changes which occurred in drawings of students of education in two different teacher preparation programs at two different institutions "in order to explore further the usefulness of this (drawing) technique and to investigage the pcssibility of deriving certain measures from it."[29]

Subjects for the study were students from two different institutions at different levels of training. These two colleges differed in their educational philosophy. One was a liberal arts college in which students of education had little contact with the public schools until student

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[27] Travers and Rabinowitz, op. cit., passim.

[28] Ibid., p. 28.

[29] Ibid., p. 30.

teaching. The second institution placed greater emphasis on professional education and provided a variety of opportunities for observation in the schools as well as general contact with children. Drawings were rated on the basis of attempting to find the answers to the following two questions:

(1) How does teacher training affect the extent to which the drawings show activity outside of the control of the teacher and activity showing partial or total pupil control?
(2) How does teacher training affect the nature of the pupil-teacher relationships manifested in the drawings?[30]

In order to answer the second question "the drawings were rated for two major aspects of pupil-teacher relationships. An attempt was made to provide ratings of the extent to which the pictures portrayed tension in the relationship between pupils and teachers. In addition, the raters were asked to identify those drawings in which teacher and pupils were working together on some project."[31]

Significant differences were found between students beginning a teacher education program and those who had completed student teaching. The beginning student produced a far more teacher dominated picture than did the student who had completed his student teaching. It should also be

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[30] Ibid., pp. 32 and 36.

[31] Ibid., p. 36.

noted that the beginning students in the two institutions did not differ on any of the drawing criteria. A more striking variation was noted in the drawings of seniors from the two colleges. The drawings of seniors from the liberal arts institution showed more evidence of teacher control and tension than did those students from the teacher education institution. Travers and Rabinowitz conclude their initial study with the following words:

> It seems important to stress, however, that in spite of their crudity, drawings have reflected certain changes in concepts of teaching following teacher training in different programs. Drawing as a research technique holds great promise and warrants the attention and study necessary to realize its richness. In addition, new instruments are needed in order to supplement the kinds of material which have so far been successfully elicited.[32]

Departing somewhat from the study by Travers and Rabinowitz a more refined analysis of the Draw-A-Teacher technique was completed by Mitzel, Ostreicher, and Reiter. In stating the purpose of this study the authors indicate:

> The fundamental purpose of this report is to describe the development of a set of five dimensions derived from the administration of the Draw-A-Teacher technique. . . .
>
> It seemed to the authors of the present study that the Draw-A-Teacher technique would make its maximum contribution to the prediction of teachers' behavior if a set of objectively-scored drawing dimensions could be developed. The primary criterion for selecting dimensions was

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[32] Ibid., p. 40.

> their potential relevancy to subsequent teacher behavior in the classroom. Also of importance was the requirement that the selected dimension be capable of description in meaningful, unambiguous terms.33

Mitzel, et al. administered the Draw-A-Teacher technique to 700 student teachers from four New York City municipal colleges. The researchers analyzed the drawings in order to identify a set of scorable dimensions. The five dimensions developed by Mitzel, et al. are: (1) Relative Teacher Emphasis, (2) Teacher Initiative, (3) Psychological Distance of Teacher from Pupils, (4) Traditionalism in Classroom Arrangement, and (5) Artistic Quality.[34] (These dimensions will be utilized in the present study.)

These researchers then evaluated each of the five dimensions on a five point scale through use of scaled sample drawings (Appendix A) which were chosen from a range of the drawing specimens. The drawings were scaled so that the value distances between them were approximately equal. The scaled sample drawings for each dimension were then assigned a numerical rating from 0-4.

In order to check interscorer agreement of the set of graded samples for each of the five dimensions, each of the three authors independently compared a sample of 100 drawings with the scaled sample drawings and assigned each

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[33]Mitzel, Ostreicher, and Reiter, op. cit., pp. 3 and 5.

[34]Ibid., passim.

of the specimens the numerical rating of the sample drawing which corresponded most closely to it. With this method a high degree of interscorer reliability was obtained.

Stern, Stein, and Bloom in their study regarding Methods in Personality Assessment gained support for use of the technique adopted from Travers and Rabinowitz.[35] Ten teacher trainees were required to draw a teacher at work in the classroom. Stern, Stein, and Bloom report as follows:

> These drawings were used as projective devices in order to gain insight into the individual's perception of himself and his professional role. The deliberately unstructured nature of the task requires the subject to select spontaneously those aspects of the professional role in question which are most significant to him, thus revealing characteristics of the role performance which are related to his own internal needs.[36]

The analysis of the drawings of successful and unsuccessful teacher trainees (as ranked by the faculty) showed that the successful teacher was much more apt to draw pictures in which teacher control and domination were de-emphasized than was the unsuccessful teacher. Stern, Stein, and Bloom have the following to say about the drawing technique:

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[35]George G. Stern, Morris I. Stein, and Benjamin S. Bloom, Methods in Personality Assessment (Glencoe: The Free Press, 1956), passim.

[36]Ibid., p. 128.

> These drawings contributed a great deal to the assessors' conception of the hypothetical model, and were considered as one of the most valuable techniques employed.37

Palmer also utilized the drawing technique along with a number of other techniques in some of the concepts of a teacher's pattern of behavior in the classroom. The subjects were students of early childhood who were preparing to teach young children from age three through eight years. Palmer notes in her study that:

> The most interesting contrast between the two groups was seen in the picture drawings. The seniors drew classrooms that were for the most part very informal with a picture of themselves as participating with children in a variety of activities. . . . The drawings made by the freshmen showed many more in a formal arrangement of furniture and with the teacher standing in front of the room teaching.38

In evaluating the procedure used in her study, Palmer makes this statement:

> Possibilities for developing a projective paper and pencil test for group use have been explored, and although the system used was somewhat complex and in need of revision, it was successful in objectifying certain characteristics which varied from subject to subject.39

The attempt has been made in reviewing the research related to this study to develop a rationale for further

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37 Ibid., p. 142.

38 Josephine S. Palmer, "Role Concepts of Prospective Teachers of Young Children" (unpublished Ed. D. dissertation, Teachers' College, Columbia University, 1954), p. 157.

39 Ibid., p. 170.

exploration of teachers' attitudes through use of the Draw-A-Teacher technique and to point out that although this instrument may not be refined, drawings of STEP students will reflect change in concepts of teaching following completion of the particular educational experiences which were selected for this internship program. Furthermore, review of related research has shown that attitudinal data extracted from drawings may be predictive of classroom behavior and that by systematically appraising the data secured it will illustrate the extent to which change has occurred in a desirable direction as applied to modern educational theories of learning. Further research and study are necessary in order to refine the drawing technique. Through the present study it is hoped that the material already elicited from the instrument can be supplemented.

CHAPTER III

PROCEDURES AND METHODOLOGY OF THE STUDY

Introduction

The purpose of this investigation is to extract data from the drawings of different groups of students at various stages of preparation in the Michigan State University experimental Student-Teacher Education Program by comparing the entry drawings of involuntary dropouts, voluntary dropouts, and persistors as well as the entry drawings and exit drawings of persistors in this program. The study is aimed at noting graphically and statistically the apparent differences which occurred in these drawings. In developing the procedural structure for the present study, the writer attempted to employ some of the suggestions offered by previous researchers with the Draw-A-Teacher technique by using (1) a larger sample, (2) a larger number of independent judges, (3) a more discriminating ten point scale, and (4) a longitudinal technique as a means of studying changes in the same group of students over time.

Instrumentation

The basic data for this study were elicited from the Draw-A-Teacher instrument which was developed by

Travers and Rabinowitz. This technique provided STEP students with a blank sheet of 8½ x 11-inch paper across the top of which were written the following directions:

> In the space below draw a picture of a teacher with a class. Draw as complete a picture as you can. Avoid the use of stick figures. Don't worry about your artistic ability or lack of it; just draw as well as you can.[1]

The Draw-A-Teacher instrument along with a battery of other group tests were administered to all students following their acceptance into the Student-Teacher Education Program. It then was administered to those STEP students who completed the program. The administration of the final test followed two terms of student teaching, the professional education sequence, and two years of internship in teaching. In order to explore the usefulness of this instrument in determining dimensional shifts, an inter-intra group comparison of the drawings was made.

Selection of the Sample

A total of 278 drawings was collected as a part of the STEP research data. Table 1 indicates the group distribution of these drawings.

All of the 127 entry drawings of STEP students and the 85 exit drawings of STEP persistors were rated numerically by selected judges so that data for further

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[1] Travers and Rabinowitz, op. cit., p. 19.

Table 1.--Group distribution of drawings

	Entry	Fall 4th Year	Exit	Totals
Drawings of STEP students	127	52	85	264
Drawings of on-campus control group	14	-	-	14
Totals	141	52	85	278

research would be available on the total population of entry and exit drawings of students who enrolled in STEP. However, from this total of 212 drawings, four entry drawings and two exit drawings from the persistor group were not included for study because corresponding entry or exit drawings were not available.

In summation then, for the present study three groups were identified for purposes of analysis. The sample selected included the 206 drawings of three groups of STEP students as listed in Table 2.

Table 2.--Groups selected for analysis

	Entry	Exit
Persistors	83	83
Voluntary dropouts	24	-
Involuntary dropouts	16	-
Totals	123	83

Administrative Procedures

In the initial stages of research the drawings were coded with the Student Code Index which had been developed for STEP research purposes and the name of the student was removed. The drawings were arranged in random order by utilizing a table of random numbers.[2] This number was recorded so that the drawings could be re-ordered in the same manner for each judge.

Three judges were selected by the researcher for each of the five dimensions under study. Each set of three judges was selected from a common professional background as indicated in table 3.

Table 3.--Professional background of judges

Dimension Judged	Professional Background
Relative Teacher Emphasis	3 teacher education faculty members
Teacher Initiative	3 public school administrators
Psychological Distance	3 graduate students in educational psychology
Traditionalism in Classroom Arrangement	3 elementary education faculty members
Artistic Quality	3 teacher education faculty members with elementary classroom experience in the arts

[2]Helen M. Walker and Joseph Lev, Statistical Inference (New York: Henry Holt & Co., 1953), Table XXIII, pp. 484 and 485.

Each set of judges compared the 212 specimen drawings with the scaled sample drawings for one of the five dimensions.

By utilizing some of the drawing specimens which were not selected for study, the writer administered a pre-test to each judge in order to ascertain the judge's understanding of the scaled sample drawings and the dimension being scored (Appendix A). Prior to the pre-test the parenthetical information underneath the scaled sample drawings was masked. This information indicates the directionality of the dimension. The scaled sample drawings are assigned simple computation variates 0, 1, 2, 3, and 4 in the appropriate direction. The parenthetical information under the scaled sample for the traditionalism dimension, for example, indicates that "4 represents a high degree of traditionalism in classroom arrangement"[3] (see Appendix A).

Using no written definitions of the dimensions, the judge was instructed merely to study the five scaled sample drawings for the dimension under consideration and to compare the specimen drawings with the scaled sample drawings for that dimension. Upon deciding the correlation between the scaled sample drawings and the specimen drawings, the judge was instructed to sort the specimen drawings into five

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[3] Ibid., p. 20.

boxes each marked with 0, 1, 2, 3, or 4. If the judge felt that the specimen drawing most resembled the first drawing in the scaled sample, he placed the specimen in the box marked "0," the "0" corresponding to the numerical label under the first drawing. After the judge rated the drawings selected for the pre-test, the masked parenthetical information underneath the scaled sample drawings was revealed to him.

Previous to the time at which he began his independent judgments, the judge was instructed further to separate the specimens in each of the five numbered boxes into - and + piles; thus creating a ten point scale which allowed for finer discrimination and improved the precision of the instrument. At this point, the judge was left alone to compare the 212 specimen drawings with the scaled sample drawings.

Following each of the fifteen judgments the numerical value assigned to each of the specimens was recorded by dimension on record sheets which were developed for each group of drawings. The - and + numerical values were converted into a ten point scale and given the following values:

-0 = 1	+2 = 6
+0 = 2	-3 = 7
-1 = 3	+3 = 8
+1 = 4	-4 = 9
-2 = 5	+4 = 10

Statistical Procedures

With the raw data obtained from the scoring process previously outlined, three major statistical tasks were completed for each dimension as follows:

(1) An estimate of interjudge reliability.

(2) A determination of the significance of the difference between the mean rating of the entry drawings of the persistors, voluntary dropouts, and involuntary dropouts.

(3) A determination of the significance of the difference between the mean ratings of the entry drawings of persistors and the exit drawings of persistors.

Components from the voluntary dropout group were utilized in estimating interjudge reliability. Gross analysis of the total data indicated that this sampling procedure would not significantly alter reliability. The estimate of interjudge reliability on each of the five dimensions was made by means of analysis of variance procedures for estimating test reliability. Mitzel, Ostreicher, and Reiter, based on Hoyt's analysis of variance technique, defined this interscorer agreement in this instance as,

$$r_{xx} = \frac{\text{Among Drawing Variance-Error Variance}}{\text{Among Drawing Variance}}$$[4]

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[4] Ibid., p. 24.

In order to make a visual presentation of the group scores by dimension the mean ratings of the entry drawings of persistors, voluntary dropouts, and involuntary dropouts were plotted on a graph for each of the five dimensions. This same procedure was utilized in comparing the dimensional mean score shifts between the entry and exit drawings of the persistors.

In addition to the graphical presentation, analyses of variance procedures[5] were applied to the entry drawings of persistors, voluntary dropouts, and involuntary dropouts in order to test the statistical significance of the differences between the groups. Analysis to determine whether there were any significant changes in the entry and exit drawings of STEP persistors was accomplished by means of applying a "t" test for the difference between correlated means.[6]

Specific statistical outcomes of the foregoing procedural structure are reported in the following chapter.

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[5]Allen L. Edwards, Statistical Methods for the Behavioral Sciences (New York: Holt, Rinehart, & Winston, 1954), pp. 316-322.

[6]Ibid., pp. 278-281.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

Quantification of data obtained from drawings is a complex procedure because the research deals with complex behavioral patterns of the personality. Yet, within the confines of this complicated milieu emerges certain common characteristics which make it possible to extract significant information which may be helpful as a predictor of teaching behavior. The purpose of this chapter is to describe the statistical outcomes of the research. Graphical presentations also are included in order to show visually the directionality of the dimensional shifts by groups.

The reporting of research outcomes includes pertinent information concerning (1) interjudge reliability, (2) intergroup comparisons of entry drawings for five dimensions, and (3) intragroup comparisons of entry and exit drawings for five dimensions.

Interjudge Reliability

The data obtained by the scoring process outlined in Chapter III provided the components for evaluating interjudge reliability for each dimension. As reported

earlier, the data from the voluntary dropout group were used in obtaining interjudge reliability coefficients by means of applying the proper values to the following technique as defined by Mitzel, Ostreicher, and Reiter:

$$r_{xx} = \frac{\text{Among Drawing Variance-Error Variance}}{\text{Among Drawing Variance}}$$ [1]

The relatively high coefficients obtained for each dimension as shown in Table 4 indicate that numerical values were assigned to the specimen drawings with a high degree of consistency by each set of judges for each dimension.

Table 4.--Summary of interjudge reliability coefficients obtained for five dimensions

Dimension	Reliability Coefficient
Relative Teacher Emphasis	.90
Teacher Initiative	.82
Psychological Distance	.84
Traditionalism in Classroom Arrangement	.91
Artistic Quality	.92

It was interesting to note in reviewing the study by Mitzel, Ostreicher, and Reiter that the reliability coefficients in the present study compared favorably with

[1] Mitzel, Ostreicher, and Reiter, op. cit., p. 24.

their interscorer agreement coefficients on all dimensions except Traditionalism in Classroom Arrangement. The five dimensions with their corresponding interscorer agreement coefficient as reported by Mitzel, Ostreicher, and Reiter were: Relative Teacher Emphasis .84, Teacher Initiative .81, Psychological Distance .95, Traditionalism in Classroom Arrangement .53, and Artistic Quality .91.[2]

In the present study, the traditionalism dimension was judged by three elementary faculty members. It is possible that the variance of reliability coefficients may be accounted for by the selection of judges with a common professional background for one particular dimension. When a judge is selected for one specific dimension there is little possibility of interrelating the characteristics of one dimension with another. This is conjecture at this point and would need to be researched over time before it could be accepted or rejected.

Intergroup Comparisons of Entry Drawings for Five Dimensions

The statistical procedures for intergroup comparisons of entry drawings for each dimension were designed to determine whether significant relationships existed between the entry drawings of various groups on a particular dimension. It was hypothesized that the mean ratings of the

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[2] Ibid.

entry drawings of STEP persistors, voluntary dropouts, and involuntary dropouts would show no significant differences with regard to Relative Teacher Emphasis, Teacher Initiative, Psychological Distance, Traditionalism in Classroom Arrangement, and Artistic Quality.

Data from the three groups were analyzed by analysis of variance. Table 5 indicates that there was no F ratio significant at the .05 level on any of the variables tested, thus revealing that there were no significant differences between the three groups of entry drawings.

Figure 1 graphically presents the mean rating for entry drawings of persistors, voluntary dropouts, and involuntary dropouts for all five of the dimensions under study. Even though the data massed in such a manner that it portrayed more teacher initiated activities, more psychological distance between the teacher figure and pupil figure, more traditionalism in the classroom, and more artistic quality among the drawings of the voluntary dropout group as compared to the persistor group and involuntary dropout group, the data in the present study do not support this finding.

Intragroup Comparisons of Entry and Exit Drawings for Five Dimensions

Analysis to determine whether there were any significant changes in the entry and exit drawings of STEP persistors was accomplished by means of applying a "t" test

Table 5.--Analysis of variance for entry drawings of three groups for five dimensions

Dimension	Persistor N=83 $\bar{X}$	Voluntary Dropout N=24 $\bar{X}$	Involuntary Dropout N=16 $\bar{X}$	F Scores
Relative Teacher Emphasis	6.00	6.12	6.23	.2219 N.S.
Teacher Initiative	8.14	8.97	8.73	2.0247 N.S.
Psychological Distance	6.80	7.23	6.77	.5125 N.S.
Traditionalism in Classroom Arrangement	7.65	8.41	7.81	1.1404 N.S.
Artistic Quality	4.48	4.94	3.75	2.2235 N.S.

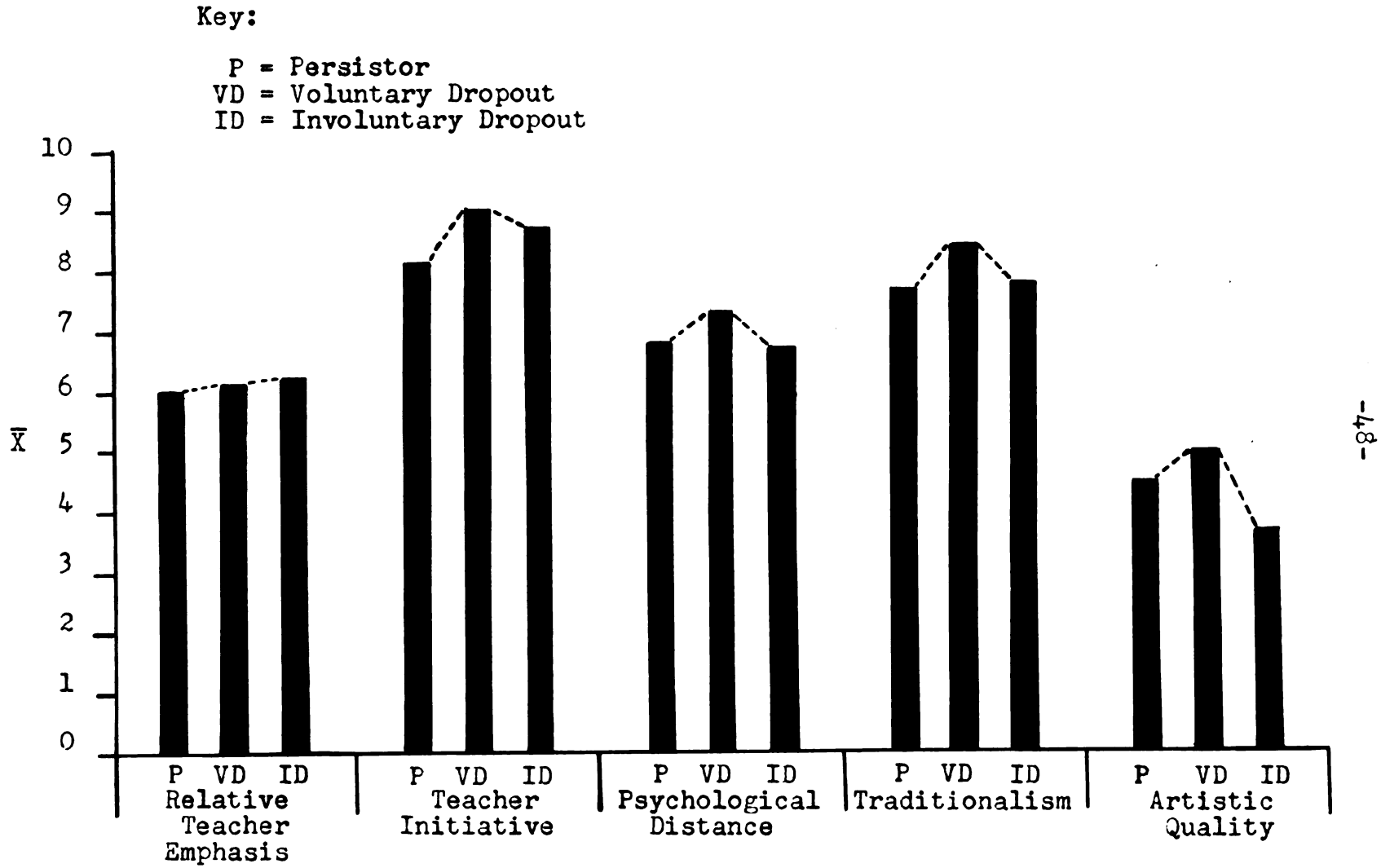

Figure 1.--Mean rating for entry drawings of three groups for five dimensions

for the difference between correlated means. It was hypothesized that the mean ratings of the entry drawings of STEP persistors would be higher than the mean ratings of their exit drawings for Relative Teacher Emphasis, Teacher Initiative, Psychological Distance, and Traditionalism in Classroom Arrangement. No significant difference was anticipated in Artistic Quality between the entry and exit drawings of persistors.

As shown in Table 6, the results of the correlated "t" test indicated that the mean ratings of the exit drawings of the eighty-three persistors were significantly different from each other at the .01 or greater level on a one-tailed test with regard to Relative Teacher Emphasis, Teacher Initiative, Psychological Distance, and Traditionalism in Classroom Arrangement and a two-tailed test with regard to Artistic Quality.

The "t" score indicated that there was a significant decline in Artistic Quality from entry drawings to exit drawings. Therefore, the hypothesis which stated that the mean ratings of entry and exit drawings with regard to Artistic Quality would be equal to one another was rejected because a significant difference in the mean ratings did occur on this dimension. This decrease in Artistic Quality could be a result of the removal of anxiety in the testing situation. The final battery of tests followed three years

Table 6.--Correlated "t" tests for entry and exit drawings of persistors for five dimensions

Dimension	Persistor Entry N=83 $\bar{X}$	Persistor Exit $\bar{X}$	"t" Scores
Relative Teacher Emphasis	6.00	4.41	5.4348*
Teacher Initiative	8.14	5.23	9.4053*
Psychological Distance	6.80	5.65	4.4975*
Traditionalism in Classroom Arrangement	7.65	4.95	9.7403*
Artistic Quality	4.48	3.90	3.3898**

*Significant at .01 level one-tailed test.
**Significant at .01 level two-tailed test.

of testing, classroom observations, interviews, and evaluation from the same test administrators. Consequently, during the final testing session more attention may have been given to the desired responses than to Artistic Quality. A few of the drawings included symbols, sketches, and labels to depict the desired outcomes. Therefore, it is conceivable that a certain amount of symbol representation and outline sketching would detract from Artistic Quality. This phenomenon might indicate a need for re-emphasizing test directions upon administration of the exit test to the same group if it is felt that Artistic Quality will affect the evaluation of the other dimensions. However, it should be noted that

the patterns for judging the specimens for all of the dimensions appeared to remain stable throughout all fifteen judgments.

Figure 2 graphically represents the striking differences which occurred between the entry and exit drawings of the STEP persistor group. It indicates the sharp decline following student teaching and intern teaching in (1) the relative importance with which the student views the teacher figure in relationship to the pupil figure (Relative Teacher Emphasis), (2) the degree of control that the teacher figure is exerting over the classroom activity (Teacher Initiative), (3) barriers which separate the teacher from members of the class (Psychological Distance), and (4) traditionalism (Traditionalism in Classroom Arrangement).

Discussion of Findings

In an effort to explore the causes for the striking differences which occurred between the entry and exit drawings of STEP persistors, the writer attempted to test the hypothesis that the amount of change shown in the drawings was related to certain variables inherent within the individual and the teaching climate.

The variables of age, sex, ability, grade-level assignment, and type of school assignment were related to the outcomes on the Traditionalism in Classroom Arrangement dimension. The traditionalism dimension was utilized to

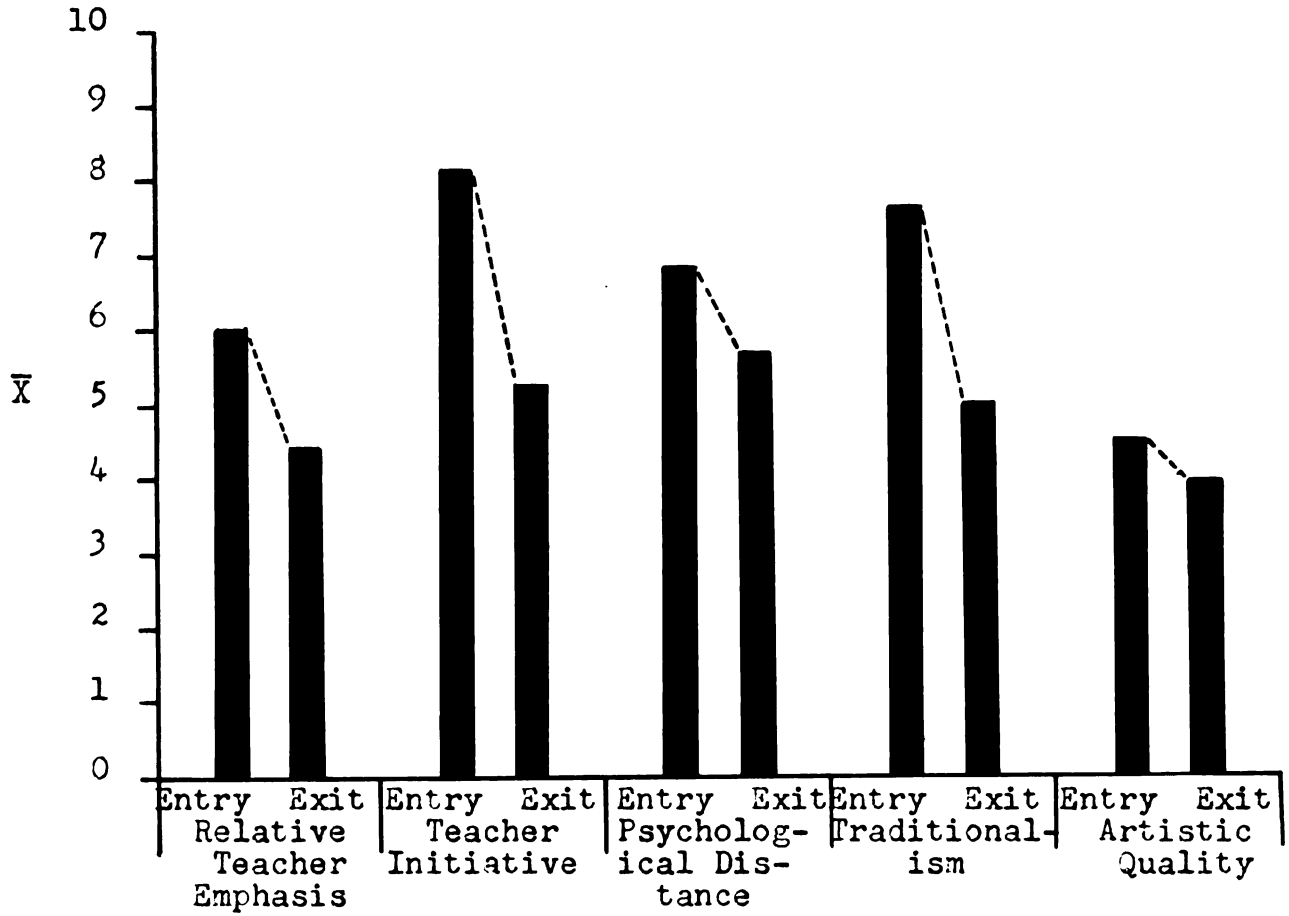

Figure 2.--Mean rating for entry and exit drawings of persistors for five dimensions

show these relationships because in the present study it was found to involve a more significant change between entry and exit drawings. Furthermore, Mitzel, Ostreicher, and Reiter in their discussion of interrelationships among dimensions reported that the scores on the traditionalism dimension appeared to saturate those of the other three attitude-content dimensions most heavily.[3]

The eighty-three persistors were divided into two groups based on the score of the entry drawing as it was related to the score of the exit drawing. Group A was composed of students whose scores indicated the greatest shift away from traditionalism and Group B was composed of students whose scores indicated the least shift away from traditionalism, remained constant, or indicated a shift in a more traditional direction. Group A contained forty-seven students and Group B contained thirty-six students. Appendix B presents the composition of the groups.

Certain variables which were expected to affect a change in traditionalism were selected for study. These included sex, age, ability, grade-level assignment, and type of school assignment.

The age variable compared students who were at age (twenty-five or under) for their college class level and

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[3] Ibid., p. 29.

students who were over age (over twenty-five) for college class level. The College Qualification Test was utilized as the measure of ability. Raw scores of the CQT totals for groups A and B were compared. The grade-level variable was based on the grade level at which the student did his intern teaching. The type of school assignment was secured from a gross instrument which was completed by the student during internship. It asked him to react to the "tightness" or "looseness" of the authority in his assigned school as he perceived it. The divisions of the foregoing variables as they are related to groups A and B are summarized in Appendix B.

The chi-square test was applied to determine the significance of the relationship between groups A and B on the foregoing variables. None of the chi-squares was found to be significant at the .05 level of confidence. However, on the grade-level and age-overage variables the direction of the relationships was positive which may indicate that a finer method of group selection would show a significant relationship between age and traditionalism and grade-level and traditionalism in the classroom.

The purpose of this part of the investigation was to explore the possible causes for the significant changes between the entry and exit drawings of persistors. If the premise is accepted that a person does not produce a drawing in a vacuum, then it could be said that the striking changes

in the drawings of these eighty-three STEP persistors are probably a result of the fact that students in this program had an early opportunity through student teaching and intern teaching to examine with guidance their attitudes, expectations, and practices with regard to the many roles or expected patterns of behavior of the teacher. It is reasonable to assume that certain variables will be affected by educational experiences. These students had an opportunity to learn through a set of selected, planned, and guided on-the-job experiences to adjust to a classroom situation and to learn adequate responses for functioning in this setting. In the opinion of the researcher these educational experiences had an influence on the socialization process of these prospective teachers with the change manifesting itself in the exit drawings.

It might be said that the differences between the entry and exit drawings of the persistors were a function of factors other than the teacher preparation program. However, it must be remembered that the differences between various groups at entry with respect to the dimensions studied were not significant whether they were persistors, voluntary dropouts, or involuntary dropouts.

Travers and Rabinowitz point out in their investigation of two teacher education institutions that ". . . the type of teacher training program, has marked consequences

on the nature of the concepts of teaching that are formed. . . . There is obviously a complex relationship between concepts of teaching, other variables, and ultimate teacher behavior in the classroom."[4]

Along with the emphasis on educational experiences of the teacher preparation program, the present investigation attempted to isolate a few of the demographic and social variables which might have effected change as it was observed in the drawing representations of prospective teachers. However, the question of change as it relates to the personality of the teacher is a complex and complicated phenomenon. Getzels and Jackson's definition of personality, in part, explained this phenomenon as they pointed out that ". . . personality means the person as a psychological or unique whole, and refers to the dynamic organization of motives within the individual."[5] No one quantitative answer is available without further analysis of the factors which determine a person's motivation toward success, dedication, and committment to the teaching role. Whether these drawing representations along with increased knowledge of certain personal characteristics can become predictors of a teacher's actual behavior in the classroom remains to be determined by further research.

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[4]Travers and Rabinowitz, op. cit., p. 40.

[5]Getzels and Jackson, op. cit., p. 507.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS FOR FURTHER STUDY

Summary

This study was undertaken to determine the extent to which drawings might provide insight into possible use of the Draw-A-Teacher instrument as a predictor of teacher behavior. This investigation analyzed the drawing specimens in order to look at attitudinal differences of various groups upon entering STEP and the changes which occurred within the same group during the teacher preparation program.

It was felt that the Draw-A-Teacher technique was a somewhat unique approach which, over time, might contribute to the prediction of a teacher's behavior if pertinent data for studying certain selected dimensions of teacher education could be elicited from the drawing representations.

Interjudge Reliability

Three judges from common professional backgrounds were selected by the writer for each of the five dimensions under study. Each set of three judges compared the 212 specimen drawings with the scaled sample drawings for one of the five dimensions. As a replication of the procedure

utilized by Mitzel, Ostreicher, and Reiter, an adaptation of Hoyt's analysis of variance procedures was applied to determine the reliability of the judges on each of the five dimensions.[1] Through this process it was established that there was a high degree of consistency among the judges who scored the attitudinal dimensions under study.

Intergroup Comparisons of Entry Drawings

In order to test the significance of the difference between the entry drawings of persistors, voluntary dropouts, and involuntary dropouts, analysis of variance procedures were utilized. This statistical analysis determined that there were no significant differences between the entry drawings of these various groups. The mean ratings, based on converted scores for entry drawings of persistors, voluntary dropouts, and involuntary dropouts, were also presented as points on a graph in order to show visually the relationships among the entry drawings of the three groups for each dimension.

Intragroup Comparisons of Entry and Exit Drawings

A correlated "t" test was applied to determine the significance of the difference between the ratings of the entry and exit drawings of persistors. The results of this

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[1]Mitzel, Ostreicher, and Reiter, op. cit., p. 24.

analysis indicated that the entry and exit drawings were significantly different from each other with regard to Relative Teacher Emphasis, Teacher Initiative, Psychological Distance, Traditionalism in Classroom Arrangement, and Artistic Quality. While the four attitude-content dimensions improved over time, Artistic Quality declined. Artistic ability did not seem to affect judge reliability or the direction of the scores of the other four dimensions.

In view of these striking differences the group which manifested the greatest shift away from traditionalism was compared to the group which manifested the least shift away from traditionalism with regard to the variables of age, sex, ability, grade-level, and type of intern assignment. The traditionalism dimension was utilized to show these relationships because in the present study it was found to involve a more significant change between entry and exit drawings and in the study by Mitzel, et al. it appeared to saturate those of the other attitude-content dimensions most heavily. The chi-square tests of these two groups produced no statistically significant data.

Conclusions

A careful examination of the content of the educational experiences of the STEP group, such as sustained experience with children and the juxtaposition of course work and elementary classroom experience, may

account for the shift away from traditionalism and its correlates. In any case, the phenomenon of movement away from traditionalism is seemingly a more complex and subtle one than that with which our present data or mode of analysis can cope.

Thus, it is being argued that since no significant differences were apparent between the entry drawings of the persistors, voluntary dropouts, and involuntary dropouts while the exit drawings of the persistors showed a marked difference from their entry drawings on the four attitude dimensions, and if, on logical grounds it is accepted that drawings reveal some of the concepts and attitudes acquired through an individual's experiential background, then an attitude shift will be revealed in a replication of a picture test of this kind. An individual projects his attitudes as he perceives himself in a particular situation. Past research indicates that drawings may also be predictive of a teacher's classroom behavior. Nonetheless, it must be reemphasized that this study did not attempt to deal with how the teacher actually behaves in the classroom. The question of change as it relates to the personality of a teacher involves complex relationships which warrant further research.

Recommendations for Further Research

Although the findings of this investigation show that differences exist in the repeated drawings of prospective

teachers, research is needed to determine what specific aspects of the preparation program are related to these differences. Further use of the Draw-A-Teacher technique will enhance the data which have been elicited from the instrument thus far. It may be possible to make an analysis of various kinds of teacher preparation programs by comparing the drawings of students pursuing the four-year, on-campus programs to those students in an intern program. Another dimension might be added by comparing the drawings of these two groups to those of a first-year teacher.

Further refinement of the instrument might be accomplished by securing drawings for the same individual at more frequent intervals throughout the course of his teacher preparation program. In this manner, it would be possible to determine the extent of correlation between series of drawings for the same person.

Alternatively, it is possible that a more systematic examination of the subtleties of the complex relationship between change in certain attitude dimensions and personal characteristics may shed more light on the factors which determine a person's motivation toward success and commitment to the teaching role. This might be accomplished by examining the individual protocols of the students who exhibited the greatest change from the entry drawing to the exit drawing and those students who exhibited the least change or moved in the opposite direction from that predicted

on any of the dimensions. This investigation could include analysis of personality and attitude tests, as well as student teaching and internship evaluations and interview data. In this manner, it may be possible to determine the degree to which the drawing representations correspond to the student's and his supervisor's accounts of the classroom behavior of the prospective teacher. This procedure could also be utilized to make a depth analysis of the personal characteristics of the persistors, voluntary dropouts, and involuntary dropouts. This approach may, for example, provide further understanding of the observed increase in teacher initiated activities, psychological distance, traditionalism, and artistic ability among the voluntary dropout group.

The continued search for the answers to the multitude of questions regarding the complexities of teacher behavior can do much toward improving teacher education. The possible avenues for further research are curtailed only by the imagination and creativity of the investigator. In the eyes of this writer the Draw-A-Teacher test is one of the creative instruments which can serve the research in teacher education.

Various types of projective devices have been successfully employed by sociologists and psychologists in studying human behavior. However, this technique remains a virtually untapped source of information for teacher education. Further

research can increase the reliability and systematize the analysis of the drawing representation and the initial logical arguments of this study can lead to more sophisticated statistical techniques. Is the Draw-A-Teacher a useful tool in identifying the trouble areas of prospective teachers in the initial stages of teacher preparation? Can this technique be utilized in pairing a student teacher with a supervising teacher? Is the instrument useful as a device for screening out psychologically disturbed teaching candidates? If there is a possibility that the Draw-A-Teacher technique can become a beneficial tool in predicting teacher behavior, it should be used experimentally in order to further its refinement, standardization, and usefulness.

In the words of Travers and Rabinowitz:

> Drawing as a research technique holds great promise and warrants the attention and study necessary to realize its richness. In addition, new instruments are needed in order to supplement the kinds of material which have so far been successfully elicited.[2]

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[2]Travers and Rabinowitz, op. cit., p. 40.

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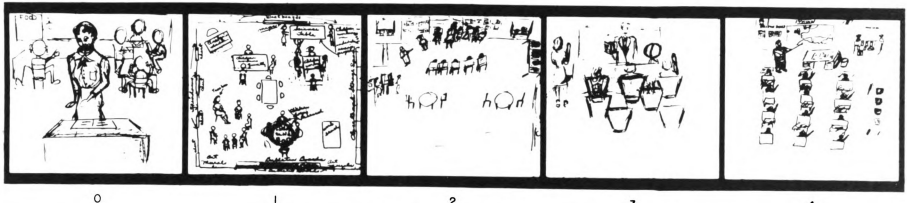
APPENDIX A

0 1 2 3 4

SCALED SAMPLE DRAWINGS FOR RELATIVE TEACHER EMPHASIS DIMENSION

(4 REPRESENTS A HIGH DEGREE OF TEACHER EMPHASIS)



0 1 2 3 4

SCALED SAMPLE DRAWINGS FOR TEACHER INITIATIVE DIMENSION

(4 REPRESENTS A HIGH DEGREE OF TEACHER INITIATIVE)

0 1 2 3 4

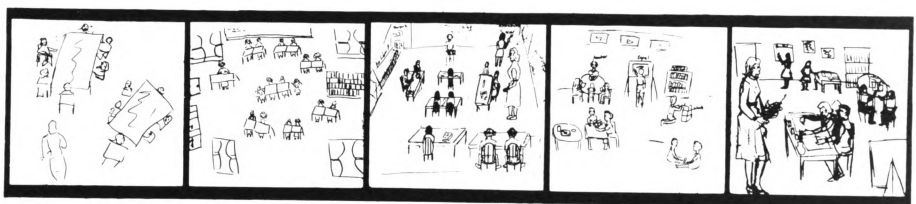
SCALED SAMPLE DRAWINGS FOR PSYCHOLOGICAL DISTANCE DIMENSION

(4 REPRESENTS A HIGH DEGREE OF PSYCHOLOGICAL DISTANCE BETWEEN TEACHER AND PUPILS)

0 1 2 3 4

SCALED SAMPLE DRAWINGS FOR TRADITIONALISM DIMENSION

(4 REPRESENTS A HIGH DEGREE OF TRADITIONALISM IN CLASSROOM ARRANGEMENT)



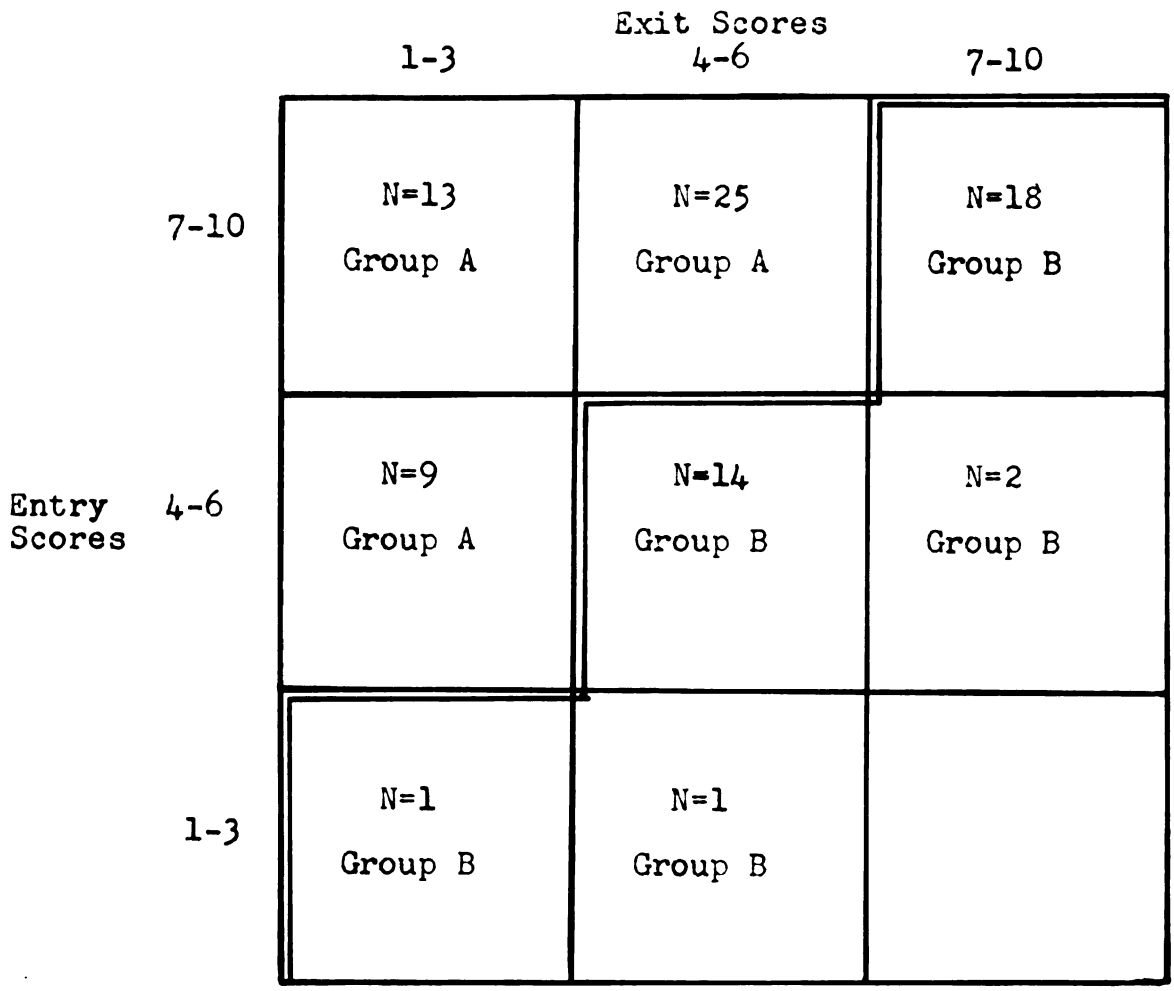
0 1 2 3 4

SCALED SAMPLE DRAWINGS FOR ARTISTIC QUALITY DIMENSION

(4 REPRESENTS A HIGH DEGREE OF ARTISTIC QUALITY)

APPENDIX B

Composition of groups A and B based on converted entry and exit scores on Traditionalism in Classroom Arrangement dimension



Chi-square tables for specified variables with observed and expected numbers for groups A and B

Sex

		M	F	
A	O	12	35	47
	E	10.76	36.24	
B	O	7	29	36
	E	8.24	27.76	
		19	64	83

X^2=.4273 N.S.

Age

		25 & under	over 25	
A	O	37	10	47
	E	33.41	13.59	
B	O	22	14	36
	E	25.59	10.41	
		59	24	83

X^2= 3.0757 N.S.

CQT Raw Scores

		65-105	105-140	140-180	
A	O	10	24	9	43
	E	9.42	24.15	9.43	
B	O	6	17	7	30
	E	6.58	16.85	6.57	
		16	41	16	73

X^2= 1.368

Chi-square tables.--Continued

Grade-Level Assignment

		K-1-2	3-4-5	6-7-8	
A	O	14	23	10	47
	E	17.55	21.52	7.93	
B	O	17	15	4	36
	E	13.45	16.48	6.07	
		31	38	14	83

X^2= 3.1360 N.S.

Type of School Assignment

		"Tight" 1-2	3	4-5 "Loose"	
A	O	12	10	25	47
	E	14.16	9.63	23.21	
B	O	13	7	16	36
	E	10.84	7.37	17.79	
		25	17	41	83

X^2= 1.1108 N.S.