

A FIELD FOLLOW-UP STUDY OF BEGINNING
ELEMENTARY TEACHERS

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A FIELD FOLLOW-UP STUDY OF BEGINNING
ELEMENTARY TEACHERS

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TABLE OF CONTENTS

| | Page |
|--|------|
| LIST OF TABLES | iv |
| LIST OF ILLUSTRATIONS. | vi |
| Chapter | |
| I. INTRODUCTION. | 1 |
| Statement of the Problem | |
| Significance of the Problem | |
| Basic Assumptions | |
| Limitations of the Study | |
| Hypothesis | |
| Sources of Data | |
| Description of Subjects | |
| Procedure for Collecting Data | |
| Procedure for Treating Data | |
| II. REVIEW OF RELATED LITERATURE. | 19 |
| III. PRESENTATION OF DATA. | 55 |
| Collection of Data | |
| Classification of Data | |
| IV. ANALYSIS OF DATA. | 73 |
| Statistical Treatment of Data | |
| Statistical Results of Treatment of Data | |
| V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS . . . | 81 |
| Summary | |
| Conclusions | |
| Recommendations | |
| APPENDIX | 85 |
| BIBLIOGRAPHY | 88 |

LIST OF TABLES

| Table | Page |
|---|------|
| I. Distribution of Sample Population by Counties . . . | 9 |
| II. Grade Levels Taught by Teachers Who Were Graduated during the Academic Years 1958-59 and 1959-60. | 10 |
| III. Levels of Sample Population Classified by the <u>Otis Quick-scoring Mental Ability Test,</u> <u>Guilford-Zimmerman Temperament Survey,</u> and Grade-point Average. | 57 |
| IV. Geographic Location of the Sample Population. . . | 65 |
| V. Title Distribution of the Immediate Superiors . . | 65 |
| VI. Teacher Age Distribution. | 66 |
| VII. Marital Status of the Sample Population | 67 |
| VIII. Pupil Enrollment of Schools Visited | 68 |
| IX. Quantification Scores by Groups of the Ratings of Teacher Effectiveness by Immediate Superiors, College Coordinators, and Composite Total. | 69 |
| X. Quantitative Totals of Evaluations by Group Classification Levels. | 70 |
| XI. Summaries of Quantified Ratings by Immediate Superiors. | 74 |
| XII. Summaries of Quantified Ratings by College Coordinators | 75 |
| XIII. Summaries of Quantified Ratings of Composite Total. | 76 |
| XIV. Analysis of Variance Data for Ratings by Immediate Superiors As Results of Statistical Manipulation of Data in Table XI | 77 |

LIST OF TABLES--Continued

| Table | Page |
|--|------|
| XV. Analysis of Variance Data for Ratings by College Coordinators As Results of Statistical Manipulation of Data in Table XII | 78 |
| XVI. Analysis of Variance Data for Ratings by Composite Total As Results of Statistical Manipulation of Data in Table XIII. | 79 |

LIST OF ILLUSTRATIONS

| Figure | Page |
|--|------|
| 1. Elementary Teacher Rating Scale | 14 |
| 2. College Recommendation for Certification. | 85 |
| 3. Letter of Introduction from the Dean of the School of Education. | 86 |
| 4. Profile Chart | 87 |

CHAPTER I

INTRODUCTION

Educators have sought adequate means of identifying the prerequisites to successful teaching. Procedures identifying successful teachers would enable administrators, teachers, and pupil personnel workers to select, guide, and train teaching personnel more appropriately. Research shows that a number of techniques have been devised to identify potentially successful teachers. For the most part, however, these procedures have proved inadequate.

The present study was made to determine the relationship between the level of teaching effectiveness of beginning elementary teachers and three individual characteristics of prospective teachers. A secondary purpose was an attempt to improve the service rendered by the School of Education at North Texas State College, Denton, Texas, in the selection and guidance of students who indicate a desire to enter the program for preparing elementary teachers.

The relationship between the level of teaching effectiveness of beginning elementary teachers and three individual traits of prospective teachers was investigated by a field follow-up. This was done to provide a suitable criterion for identifying some of the prerequisites to elementary

teaching effectiveness and to enable the School of Education to evaluate the results of its elementary teacher training program more effectively.

Statement of the Problem

The problem in this study was to determine whether there is a relationship between the level of teaching effectiveness and the individual factors of temperament, intelligence, and grade-point average. This constellation was the basis for classification of the sample population into below-average, average, and above-average groups, according to teaching effectiveness.

Significance of the Problem

According to Barr (2), there are approximately one and one-quarter million teachers in this country, teaching approximately thirty million pupils. The schools in which these pupils and teachers work constitute one of the country's most extensive enterprises and supply the foundations for democratic order. Next to the pupil, the teacher is the most important single factor in this great enterprise. He is the central impelling force in the educational effort. Without effective teachers, there cannot be effective schools.

To obtain qualified teachers, there must be wise selection and guidance, good preparation, and sound employment and placement practices. The education of teachers should be

predicated upon discriminating selection. In order to select and guide wisely, one must have accurate knowledge of the prerequisites of effective teaching and possess the means of identifying these prerequisites in a reliable fashion. The effective education of teachers, both before and after they enter service, depends upon the ability to identify progress in attaining teaching efficiency. Inefficiency in evaluation leads to inefficiency in teacher education. Only by knowing the results of efforts to educate teachers may this process be improved. Those responsible for selection, guidance, and education need more precise information relative to teaching efficiency. Administrators and placement officials need this information for effective employment assignments and promotion practices.

The fair treatment of teachers and pupils is likewise involved in this problem, as is the quality of service rendered by the schools. There is already available considerable evidence, subjective and objective, to indicate that current methods of evaluating teacher efficiency are inadequate. The teacher, the professional educator, the administrator, the pupil, the home, and society would all profit by better measures of teaching efficiency.

This study proposed to isolate the more effective procedures for guidance of future elementary teachers receiving their training in the School of Education at North Texas State

College, Denton, Texas. Events in recent years have made the public more aware of the responsibilities which the public educational system must successfully discharge to the child, the home, and society. The manner in which teacher-training responsibilities are met by teacher-education institutions will influence greatly the course of development of these three areas.

In the state of Texas, the responsibility for recommending elementary education students for state certification has been vested in the college conferring the degree. Responsibility for recommending students for admission to the elementary teacher education program at North Texas State College has been delegated to the Committee for Admission of Students to the Elementary Teacher Program. Successful completion of this program is necessary for recommendation for state certification; this recommendation is made by the Dean of the School of Education. A copy of the recommendation form is shown in Figure 2. (See Appendix, p. 85.)

The Committee for Admissions administers a program designed to screen students not properly suited for elementary teaching and to provide guidance for the educational programs of potential elementary teachers. The Committee for Admissions continually seeks more appropriate methods and procedures for administering its program.

The purpose of determining the relationship between the level of teaching effectiveness and the individual factors

of temperament, intelligence, and grade-point average was to discover the extent to which these factors, as a group constellation, were predictive of success in elementary teaching. The ratings of teacher effectiveness were gathered for screening and guidance of potential elementary education students receiving their training at North Texas State College. It is anticipated that these data will aid the Committee for Admissions in planning the professional and social development of elementary education students for fulfillment of individual needs. In summary, the data yielded by this investigation should facilitate the School of Education at North Texas State College in discharging its responsibility for preparing public school teachers, and should be applicable to all similar programs.

Basic Assumptions

1. It was assumed that a sufficient number of beginning elementary teachers would be available to permit classification of a sample population according to the individual factors of temperament, intelligence, and grade-point average.

2. It was assumed that first- and second-year beginning elementary teachers would represent a valid and reliable sample for evaluating elementary teaching effectiveness.

3. It was assumed that there was a sufficient number of immediate superiors who would accurately rate the individual

elementary teachers on the basis of their first and second years of teaching experience.

4. It was assumed that the college coordinators of student teaching would recall accurately the activities of each elementary education student and use the rating scale effectively.

Limitations of the Study

As designed and conducted, the experimental format of the investigation possessed several limitations not controlled, as follows:

1. The study was made on a female population, since elementary education graduates for the academic years 1958-59 and 1959-60 did not provide sufficient male beginning elementary teachers for classification of an adequate sample. Therefore, the results may appropriately be generalized only to guidance efforts administered to female elementary education students.

2. The sample population was limited to certified beginning elementary teachers in Texas. Therefore, generalizations predicting beginning elementary teaching success may appropriately be made only when administering placement efforts to elementary teachers for teaching positions requiring similar state certification.

3. The sample population was limited to graduates of North Texas State College during the academic years of 1958-59

and 1959-60, who had accumulated one to two years of teaching experience. Therefore, generalizations predicting beginning elementary teaching efficiency may appropriately be made concerning only relatively short-term, and not long-term, successful teaching assignments.

4. The sample population utilized only beginning elementary teachers employed in the metropolitan area of north-east Texas and west central Texas cities. Therefore, generalizations predicting beginning elementary teaching efficiency may appropriately be made only in placement of beginning elementary teachers in such urban areas.

Hypothesis

The hypothesis of this study was that the effectiveness of beginning elementary school teachers, as rated by their immediate administrative superiors and their college coordinators of student teaching, would vary significantly among three levels of groups classified by utilizing a standardized test of mental ability, selected scales of a standardized personality inventory, and complete undergraduate grade-point averages.

The testing of the hypothesis facilitated answering the following questions:

1. What is the relationship between the level of elementary teaching effectiveness of the sample population of elementary teachers trained by North Texas State College and

the individual factors of temperament, intelligence, and grade-point average?

2. Are the classification groups of "below average," "average," and "above average" significantly different groups?

Sources of Data

The sample population was selected by using the records of the Committee of Admissions. Classification data concerning temperament and intelligence were secured from the Committee's records of graduates from the 1953-59 and 1959-60 academic years. The current teaching assignment and location were obtained from the North Texas State College Placement Office. Grade-point averages were computed from permanent records in the office of the Registrar at North Texas State College, and the identity of the college coordinator of student teaching for each graduate was obtained from records available in the office of the Director of Teacher Training, School of Education, North Texas State College.

The evaluation of beginning elementary teaching effectiveness was obtained from the elementary teachers' immediate superiors by a personal field interview and from the college coordinators of student teaching at North Texas State College, who rated subjects on the basis of their senior student teaching experiences.

Description of Subjects

The subjects used in this study were certified beginning elementary teachers who were graduated from North Texas State College during the academic years of 1958-59 and 1959-60. The sample population was composed of female beginning elementary teachers employed in the northeast Texas counties of Collin, Cooke, Dallas, Denton, and Tarrant, and in west central Texas counties of Midland and Ector, as distributed below in Table I.

TABLE I
DISTRIBUTION OF SAMPLE POPULATION BY COUNTIES

| Counties | Number of Teachers |
|------------------|-----------------------|
| Collin | 12 |
| Cooke. | 1 |
| Dallas | 18 |
| Denton | 4 |
| Ector. | 5 |
| Midland. | 16 |
| Tarrant. | <u>19</u> |
| Total. | 75 |

The beginning elementary teachers had at least five, but not more than eighteen, months of teaching experience. The sample population held Texas elementary teaching certificates. Age range of the sample population was from twenty-two to forty-eight years. The majority was found to be married. Grade assignments ranged throughout the elementary level.

The number of beginning elementary teachers assigned to each grade level is indicated in Table II.

TABLE II
GRADE LEVELS TAUGHT BY TEACHERS WHO WERE GRADUATED
DURING THE ACADEMIC YEARS 1958-59 AND 1959-60

| Grade | Frequency |
|-----------------|-----------|
| 6 | 5 |
| 5 | 9 |
| 4 | 11 |
| 3 | 19 |
| 2 | 17 |
| 1 | <u>14</u> |
| Total | 75 |

Grade level frequencies in Table II were provided by each teacher's immediate superior.

Procedure for Collecting Data

Data relating to the effectiveness of beginning elementary teachers were obtained from the immediate administrative superiors and college coordinators of student teaching by the questionnaire-interview technique. These data were gathered during the months of February and March, 1961. A standard teacher-rating scale was used to record the data. According to Barr (1), although teaching is many things, there are common elements which exist; it is these common elements which this study sought to measure and analyze. The literature states three different approaches to

characterization of teaching effectiveness. Sometimes, the successful teacher is described in terms of personal qualities; sometimes, in terms of mental prerequisites such as knowledge, special skills, and attitudes; and sometimes, in terms of behavior.

It must be remembered that the objective in this study was to measure the level of effectiveness of beginning elementary teachers at which they have actually performed on the job. It is known that teachers may possess the necessary qualities and mental traits, yet not be successful in teaching. Based on these facts, behavior in the classroom teaching situation was the selected criterion for measuring the effectiveness of beginning elementary teachers.

Educational literature offers many suggestions for measuring behavior in the work situation. However, most of these suggestions are based on each author's ideas on rating teaching effectiveness. Barr (1) presents eleven points for measuring the characteristics of successful teaching. These points were formulated by the teachers attending the Summer Seminar for Factors in Teacher Success at the University of Colorado in 1954. The telescoping of the many descriptive terms for measuring teaching success was the result of a two-step process at the Colorado conference: (1) an analysis was made of the experimental and psychological literature on the subject--approximately 157 titles, and (2) a group of eighty-three experienced teachers, supervisors, and administrators

was appointed to reread the general literature, over one thousand titles, and to list and categorize the descriptive data. The categorizing was done by group discussion, which extended over a six-week period. The search was for common elements found within the data gathered. The efforts resulted in eleven behavioral characteristics of successful teaching.

For this study, the examples illustrating each characteristic were determined by utilizing the jury-of-judges technique, and represent the consensus of twenty-three graduate students at North Texas State College. The judges were experienced teachers, supervisors, and administrators studying at the doctoral level. The judging procedure involved writing each rating criterion on a chalkboard so that all could study the criterion's meaning. The judges were asked to state their ideas of concrete examples which, they believed, represented the criterion under consideration. The judges as a group were then asked to vote on the various proposed examples, and a consensus was obtained. This process was followed until concrete examples were added to each criterion as a frame of reference for the immediate superiors and the college coordinators of student teaching. The rating scale is presented in Figure 1.

ELEMENTARY TEACHER RATING SCALE

| S | G | A | P | I |
|---|------|---------|------|-----------|
| SUPERIOR | GOOD | AVERAGE | POOR | INFERIOR |
| S | G | A | P | I |
| 1. Degree to which teacher exhibits behavior associated with identifying pupil needs; e.g., helping students set realistic goals, familiarizing self with student's cumulative records, being familiar with individual physical, intellectual, and emotional needs of students. | | | | |
| | | | | X X X X X |
| 2. Degree to which teacher exhibits behavior associated with choosing appropriate learning experiences; e.g., field trips, oral reports, written reports, and group experiences. | | | | |
| | | | | X X X X X |
| 3. Degree to which teacher exhibits behavior associated with providing for individual differences; e.g., providing individual activities, providing individual instruction, and providing proper grouping. | | | | |
| | | | | X X X X X |
| 4. Degree to which teacher exhibits behavior associated with creating favorable mind sets and motivation; e.g., choosing appropriate subject material, maintaining teacher-pupil rapport, and maintaining proper physical and social environment. | | | | |
| | | | | X X X X X |
| 5. Degree to which teacher exhibits behavior associated with making activities meaningful; e.g., relating material to practice situations, relating material to previous experiences, and relating material to future plans. | | | | |
| | | | | X X X X X |
| 6. Degree to which teacher exhibits behavior associated with analysis and organization of learning experiences; e.g., teacher-pupil planning and operation, maintaining functional communication channels, and aiding students in self-evaluation. | | | | |
| | | | | X X X X X |

RATING SCALE--Continued

| | S SUPERIOR | G GOOD | A AVERAGE | P POOR | I INFERIOR |
|--|---------------|-----------|--------------|-----------|------------------------|
| 7. Degree to which teacher exhibits behavior associated with setting and defining goals; e.g., aiding the student in understanding own goals, aiding the student in setting acceptable social, moral, and ethical goals. | | | | | S G A P I X X X X X |
| 8. Degree to which teacher exhibits behavior associated with direction of group activities; e.g., encouraging interaction, maintaining an acceptant-democratic atmosphere, and maintaining group interest. | | | | | X X X X X |
| 9. Degree to which teacher exhibits behavior associated with proper teacher-pupil relations; e.g., acceptance of students, acceptance of student as a person of worth and dignity, and working with the student rather than on or for. | | | | | X X X X X |
| 10. Degree to which teacher exhibits behavior associated with the use of appropriate learning aids; e.g., audio-visual aids, current displays, integrating subject matter with aids. | | | | | X X X X X |
| 11. Degree to which teacher exhibits behavior associated with the evaluation of pupil growth and achievement; e.g., evaluating students' total growth, evaluating students' potential, and proper testing procedures. | | | | | X X X X X |

Interviewee's title _____

Teacher's grade assignment _____

Teacher's age _____

Teacher's marital status _____

School enrollment _____

Fig. 1--Elementary teacher rating scale

In order to convey the support of the School of Education to the study, the Dean provided a letter introducing the interviewer to the administrative superiors in the field. The letter of introduction is presented in Figure 3. (See Appendix, p. 86.)

College coordinators of student teaching rated the subjects' effectiveness as a teacher on the basis of their senior student teaching experience, by means of a personal interview with the investigator at North Texas State College.

Procedure for Treating Data

The next step was to quantify the data collected. Murphy and others (6, pp. 14-67) found that a rater yields a distribution resembling normal when offered five alternatives from which to choose, such as inferior, poor, average, good, and superior. These alternatives were assigned the quantitative weights of: inferior, 1; poor, 2; average, 3; good, 4; and superior, 5. Two other important advantages, according to Murphy, are that the method (1) does away with raters or judges of subjective data and errors arriving therefrom, and (2) yields direct objective information concerning teacher effectiveness. In addition, the procedure has high reliability.

Using the above quantitative data, totals were computed and used as the raw data for analysis in this study. Three different statistical tests of the hypothesis were made: one

with the ratings of immediate superiors, one with the ratings of the college coordinators of student teaching, and one with a composite of the two ratings.

The experimental design utilized to evaluate the ratings of beginning elementary teachers was the one-group technique, defined by Good (4, pp. 492-493) as follows:

A one-group experiment has been conducted when one thing, individual, or group has had applied to or subtracted from it some experimental factor or factors and the resulting change or changes determined or measured. For example, if a group of pupils takes equivalent forms of a standard reading test in order to determine the effect on their scores of varying mental attitudes induced by a different mental-set for each form of the test, a one-group procedure is involved. The pupils may take one form using the regular printed directions accompanying the test. Scores on this form may serve as a norm against which to check performance on the equivalent forms of the test, when the experimenter has sought to induce specific mental attitudes such as encouragement or discouragement. In general, it is desirable, and even necessary in terms of significance of findings, to know the normal or expected performance of the group as a basis for comparison with results produced by application of the experimental factor.

The data were treated in the following statistical manner:

Simple analysis of variance with the F ratio, according to McNemar (5, pp. 249-280), was employed to test the significance of the hypothesis. The technique analyzed whether or not any significant difference in the mean ratings of the effectiveness of beginning elementary teachers existed among the three levels of classification: below average, average, and above average.

The raw data were analyzed in order to draw as many conclusions as were reasonable about the differences present among means. According to Edwards (3, pp. 331-332), a statement of the result of analysis of variance is not specific enough. Edwards has pointed out that it is desirable to determine whether or not a significant gap exists between means when they are arranged in order of magnitude; this determines whether or not the means fall in significantly different groups. In this study it was anticipated that statistical treatment will yield valuable information on prediction of the level of teaching effectiveness by the individual factors of temperament, intelligence, and grade-point average.

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CHAPTER II

REVIEW OF RELATED LITERATURE

Within the last thirty years, much psychological research has emphasized the importance of teacher evaluation. To select, guide, and educate teachers properly and effectively, much more must be known concerning how to identify and accurately describe the prerequisites to successful teaching. The immediate necessity of proper teacher selection is evidenced by increasing demands by the public. The greatly increased pupil load of our public schools demands training of more teachers as a key effort in maintaining the country's position in the free democratic world. The importance of teacher selection is further evidenced by numerous articles concerning prediction variables, evaluation designs, and rating methods.

In discussing some of the guiding principles in the study of teacher effectiveness, Gage (13) presented a frame of reference for research. Reports show that the following delimitations refine the problem of teacher selection and facilitate its analysis, according to Gage. For the classification of goals, research should be concerned with behavioral aspects of teacher effectiveness rather than a general overview of the teaching situation. Research should

be concerned with specific rather than general conceptions designed to suit special purposes. Efforts should be concerned, at least initially, with a conceptual analysis of the research to be done, rather than a detailed implementation of the work. It is beyond the province of research on teacher effectiveness to formulate the ends of education or to choose among the differing goals. Most research has gone astray on the fundamental rule of conciseness, and has been formulated in terms presuming the achievement of much more than is actually possible for any single research task. The determination of basic social values necessary for teacher effectiveness, and the assessment of efficiency in achieving the values, call for at least two distinct types of research designs.

Within the frame of reference of the established delimitations, Gage (13) offered the following points on research design. In the present state of research, no single design can be made which would be definitive; it is doubted that any one study, however conceived and supported, could go far in producing relatively final knowledge in such a complex task. Research should be designed to furnish further insights by which subsequent studies may be guided. Research on teacher effectiveness should be ultimately defined in terms of the effects a teacher produces with pupils, school operations, and school-community relationships. Such effects are the

goals of the teacher's work; therefore, they serve as the essential criteria for his effectiveness.

Teacher effectiveness consists of no single, fixed pattern of behavior. When a situation changes so that there are different categories of teachers, pupils, facilities, psychological climates, or purposes, it is obvious that different patterns of teacher behavior will be necessary. Gage (13) stated that, upon analysis, "criteria" of teacher effectiveness are found to lie, not on a single plane, but on various levels with respect to completeness. Perhaps the most basic criteria are the values held by our society or by a particular community. Community opinion determines what pupil changes are considered desirable and what effects of the teacher are desired. Such criteria are unavailable for selecting teachers for employment and selecting students for teacher training. Therefore, these criteria must be reduced to concrete and measurable aspects. Hence, a given set of ultimate criteria may have two different roles: they may be predictors of educational philosophy or serve as criteria for study of conditions on the concrete level. With these points in mind, the question is still unanswered as to what can be done to evaluate teacher influence.

Orleans (22), in presenting some preliminary thoughts on the criteria of teacher effectiveness, pointed out a major weakness in many research designs. Orleans warned that the

weakness has come through failure to think through major issues concerning teacher effectiveness, claiming that the ultimate criterion for measuring teacher effectiveness is pupil change as indicated by achievement tests.

Ryans (23) stated that a teacher is effective to the extent to which he is able to provide ways and means that are favorable to the development of understandings, work habits, desirable attitudes, and adequate personal adjustment on the part of the pupils. Ryans observed that in any research having to do with teacher effectiveness the most fundamental concern is the criterion. The criterion and its selection give meaning to the results. An adequate criterion of teacher effectiveness should take into account all of the important aspects of teaching. The criterion should be composite in nature and should include the direct observation of teacher performance, as well as pupil change. When teacher ratings are used, the research must be planned to escape the frequently encountered lack of a reliability and validity of such methods. Ratings should be made by trained and experienced observers. When pupil change is the criterion, care must be taken to sample adequately the entire range of pupil behavior. Care must be given to the statistical control of the problem when pupil change is the criterion. Because of lack of reliability and validity of teacher ratings and pupil change data, secondary criteria reflecting the basic criterion

must be sought. These secondary criteria should identify teaching qualities that are related to teacher effectiveness and can be used as reliable guides.

Hampton (16), in a study of a particular group of graduates in education, found six traits that measure something in common; however, they possess enough specificity that perhaps they should be separate items on a rating scale. These items--cooperation, loyalty, courtesy, friendliness, health, and vitality--need to be identified more clearly and used as criteria for teacher effectiveness ratings. Hampton's study indicated that rating scales may be developed which contain relatively few items, yet accurately measure teacher effectiveness.

Barr (3), in a survey of four approaches to teacher evaluation, determined that the rating of teacher effectiveness needs procedure improvement. Barr stated that ratings should not be confused with evaluation, since ratings represent only one approach. The present trend in teacher ratings is toward two raters. Four approaches were mentioned as a guide to research design: (1) evaluation of performance by observing behavior; (2) evaluation of the degree to which a teacher possesses the mental prerequisites necessary to effective teaching--knowledge, skill, interests, and attitudes; (3) evaluation of the degree to which the teacher possesses the necessary personality characteristics--

friendliness, interest in others, and stability; and (4) evaluation of pupil change--growth and achievement.

Barr (2) studied the failures of beginning teachers in an effort to form the basis of a sound supervisory program. The various problems of beginning teachers were divided into categories of long and short ranges. In the short-range category, the inexperienced teacher often had difficulty in the following: personal adjustment to the classroom situation, stating and defining the standards of work to the pupils, adequate lesson planning, administrative detail, and general classroom procedures. In the long-range category, the inexperienced teacher often had difficulty with the following: coping effectively with individual differences, presentation of subject matter, motivation of pupils, organization of subject matter, maintaining proper conditions of work, and effective measuring of achievement. Principals usually agreed with the teachers as to their difficulties, with occasional changes of emphasis. Teachers, however, listed difficulties not listed by the principals, such as conditions of work, adjustment of the teacher, lesson planning, and administrative details. Principals listed three difficulties not enumerated by teachers: emphasis on subject matter rather than pupils, teacher's relationship to the school and community, and failure to use instructional methods. Barr found that a combination of the difficulties recognized by both teacher and

principal constitutes a good measure of the difficulties of the beginning teacher.

Zant (32) found that the relation between course work and grades in practice teaching produced correlations no larger than .32. Marks for classes in educational psychology, education, and educational methods courses were used in computing correlations. Zant indicated that there was something more than teacher education courses, as taught to the students, that caused the low correlations; he stated that the other factor is intelligence.

Best (8) stated that teacher selection must involve an evaluation of fitness for the job. Teachers must be continually evaluated from the time they sign the contract until they leave the system. Any tenure selection should be the result of careful consideration. A definite incentive should be given to those who do their best; excellence must be rewarded. A pat on the back will not buy shoes; neither will it obtain that "extra something" desirable in teaching, Best said. In developing a salary plan, the administration should try to stimulate better teaching, and all efforts should be used as a means to this end. The superintendent should assume final responsibility for over-all supervision of educational administration of the school's salary program. Best stated that no system of incentive pay can work if such pressures are allowed to exert an influence on those responsible for honest evaluation.

Barr (4) discussed merit pay and merit rating in a study designed to outline the problems involved in incentive programs. Three methods were supported for the proper evaluation of teachers: (1) indicators of pupil change; (2) measure of the degree to which the teacher possesses the necessary knowledge, skills, attitudes, interests, and ideals; and (3) rating scales and check lists for teachers as an index of effectiveness in evaluating personality, performance, and background determiners of good teaching. Barr suggested three merit categories of "master teacher," "apprentice," and "journeyman," with pay increases within each category. The title "master teacher" would embrace those who have shown themselves to be superior teachers through training and experience, adequate maturity, and demonstration of leadership and interest in pupils. One problem still to be answered is what ultimate social and educational values will be derived from such differentiations. A reliable answer to this question can be given only when much more data is obtained and analyzed.

Kaufmann (18) constructed a teacher self-test to determine how effectively his services were being rendered. A scale was presented enabling the teacher to gain an understanding of his teaching effectiveness. The scale emphasized the level of effectiveness in the following traits: teacher-pupil relationships, teacher-teacher relationships, teacher-administrator relationships, teacher-public relationships,

and teacher-professional relationships. Kaufmann believed that these areas were the keys to effective teaching and that the teacher should seek to improve his effectiveness.

Barr (5) discussed the definitions of personal factors relative to teacher effectiveness. Barr worded these definitions carefully to provide a satisfactory point of departure for investigation. The following seventeen definitions were summarized:

1. Knowledge of the subject.
2. Intelligence.
3. Socio-economic status.
4. Skill in expression.
5. Personal fitness.
6. Social adjustment.
7. Emotional stability.
8. Teacher-pupil relations.
9. Leadership.
10. Interest in teaching.
11. Attitude for teaching.
12. Health.
13. Energy.
14. Motivation.
15. Cultural attainment.
16. Self-concept.
17. Empathy.

Barr's sources of opinion were magazine articles on the teaching of social studies; each article was carefully studied for expert statements of purposes of education.

Brookover (10) presented a study relating teaching ability to social factors. Social studies teachers were rated in terms of mean gains made by their pupils. It was found that teachers who rated high with respect to teacher-pupil interaction tend to teach slightly less history. The teacher's role in the community was found not to be related to the teacher's ability to produce pupil gain in social studies. It was determined that pupil gain in information increased with teacher age up to thirty-eight years and, after that age, pupil gain decreased. It was found that the type of position held by the teacher in the school system was not related to pupil gain. Surprisingly, teacher attitude toward his position was not found to be related to pupil gain. Teachers having close relationships with their students were considered better teachers by their students. Also, teachers whom the administrators believed to have closer rapport with their classes received higher ratings on teacher effectiveness. Teachers from the immediate community received essentially the same supervisory ratings as teachers from distant areas. Teachers who supervised extraclass activities were considered less effective, by both supervisors and pupils, than teachers who did not engage in such work. Teachers who sometimes felt

depressed and those who felt as though they were not appreciated were no less effective than others in bringing about pupil gain. Such teachers were not rated lower by supervisors; however, they received lower ratings on teacher effectiveness by pupils. Subjective ratings of teacher effectiveness by superintendents, trustees, and pupils were intercorrelated. Various administrators' ratings of teacher effectiveness were found to be unrelated to teacher effectiveness, as indicated by pupil change data. Pupil ratings of teacher effectiveness had a low, but inconsistent, relationship with teacher effectiveness, as indicated by pupil gain data. These findings indicate that many factors which are usually the basis for employing teachers are not related to objective measures of teacher effectiveness in terms of pupil gain.

Witty (31) presented some characteristics of the effective teacher in a study based on a contest where the pupils were asked to indicate which teacher had been the most help to them. The pupils made their selections in qualitative form by means of personal letters. A summary of the positive qualities follows:

1. Cooperative, democratic attitude.
2. Kindliness and consideration for the individual.
3. Patience.
4. Wide interests.

5. Pleasing personal appearance and manner.
6. Fairness and impartiality.
7. Sense of humor.
8. Good disposition and consistent behavior.
9. Interest in pupils' problems.
10. Flexibility.
11. Use of recognition and praise.
12. Unusual proficiency in teaching a particular subject.

The letters of many students included negative qualities which were considered undesirable. A summary of the negative qualities is presented as follows:

1. Bad-tempered and intolerant.
2. Unfair and inclined to have favorites.
3. Disinclined to show interest in the pupil and to take time to help him.
4. Unreasonable in demands.
5. Tendency to be gloomy and unfriendly.
6. Sarcastic, and inclined to use ridicule.
7. Unattractive in appearance.
8. Impatient and inflexible.
9. Tendency to talk excessively.
10. Inclined to talk down to pupils.
11. Overbearing and conceited.
12. Lacking in sense of humor.

Witty (31) stated that teachers have an unlimited opportunity opportunity to practice mental health in the classroom.

To do so, they must make an effort to provide classroom conditions which satisfy basic human needs. Effective guidance of the feelings and the emotions of the child has become a goal of many effective teachers and educators.

Ryans (24), in a statistical analysis of predictors of teaching success, found that the criteria consisted of several dimensions which may be associated as a constellation for prediction. Five major categories, emerging from a factorial analysis, follow:

1. Originality, adaptability, and tolerance.
2. Businesslike, organized approach.
3. Understanding, kindly, fair, and tendency to be composed, steady, and easygoing.
4. Approachable, friendly, tactful, and gregarious.
5. Physique, voice, and expressive movements.

The findings of this analysis of criterion data suggested that the effective teacher may be described in terms of several dimensions, or clusters, of qualities or behaviors. The dimensions suggested by this study tend to overlap and intercorrelate positively. From the practical standpoint of teacher recruitment and placement, a significant finding was that potential teachers who are high on one of these factors will tend to be high on the others.

Lamke (19), in a study concerning personality and teaching success, investigated by the method of paired comparisons

whether or not personalities of good and poor teachers characteristically differed when evaluated by sixteen personality factors. It appeared that good teachers were more likely to be gregarious, adventurous, frivolous, abundantly emotional, interested in the opposite sex, strongly artistic, sentimental, polished, and fastidious. Poor teachers were found likely to be shy, cautious, conscientious, emotionally unresponsive, clumsy, mildly interested in the opposite sex, easily pleased, and more attentive to people. It appeared that success may be a balance of various traits and that, to properly measure teacher effectiveness, one must know what is required for the optimum balance. It may be that, on this basis, prediction of teacher effectiveness may be improved. In general, Lamke stated, it is clear that the problem of associating personality with teacher effectiveness is a demanding one.

Lynch (20) discussed the current trend in rating of teacher effectiveness, examining it psychologically in a study designed to indicate the approaches to rating. Early methods tried to be completely objective, designating teaching efficiency as the sum of the various component parts obtained from the quantification of qualitative aspects of teacher effectiveness. Present methods of rating teacher effectiveness are showing a change in emphasis. The view held by modern psychology, that personality is an organized whole

rather than a collection of parts, is being utilized. Present methods aim directly at accounting for teaching behavior and measuring the total teaching process rather than a collection of traits necessary for teaching. Lynch stated that rating of particular traits were influenced by the general estimate of the teacher's effectiveness and that specific ratings were justifications of general opinion. A collection of ratings concerning health, methods, and personality qualities should not be confused with evaluation of teacher effectiveness, according to Lynch.

Symonds (27), discussing the various criteria desirable for use in predicting teacher effectiveness, maintained that teacher selection should be done by competent psychologists similar to those selecting personnel for strategic assignment from the Office of Strategic Services during World War II. The eleven suggested devices follow:

1. Personal history blank.
2. Ratings.
3. Interviews.
4. Situation testing.
5. Discussion.
6. Social, shared tasks.
7. Following instruction.
8. Stress situations.
9. Psychodrama.

10. Projective techniques.

11. Sociometric techniques.

Symonds (27) stated that a real estimate of personality demands a detailed and extensive interview, in addition to observations of the prospective teacher in many practical situations revealing the quality of his performance. Sizing up the prospective candidate for teaching requires time and expense, if undertaken effectively. However, if it is important to select the right persons to teach children, then it is also worth expending the time and money necessary to accomplish this objective. Since Symonds' composite method was too elaborate for each administrator to conduct during each interview, it was suggested that a central agency be utilized where specialists make reports of personality to superintendents. One assessment would be insufficient to last a lifetime. Whereas certain aspects of personality seem to be fixed and grounded, aspects such as interests and motivation may change from time to time. The program would be one of guidance rather than of selection. The central agency might also include information as to the candidates' suitability for supervision and other activities as well as teacher potential.

Clarke (11), in a discussion of the relationship of personalities of elementary school teachers and their evaluation of objectionable pupil behavior, stated that significant

relationships were found to exist between temperament traits and certain annoyances. Clarke found that certain types of pupil behavior stimuli are more annoying to teachers with good mental health than those with bad mental health. Conversely, he discovered that other types of pupil behavior stimuli are more annoying to teachers with poor mental health than those with good mental health. Clarke stated his hope that the first steps had been taken in his study toward the understanding of the basic problem of teacher effectiveness.

Symonds (28) designed a study to show that schools will attract as teachers persons having different psychological needs, as schools change in philosophy and methodology. Symonds stated that teaching gives a sense of achievement to the teacher, thereby fulfilling a basic need. This achievement may be obtained through promotion or by public recognition. Some teachers find that teaching enables them to achieve vicariously through the later accomplishments of their pupils. On the other hand, there was evidence that teaching can serve as an avenue of escape from undesirable home conditions. Teaching is very attractive because of the social recognition it affords. Many teachers look upon teaching as security for later years. The social contacts received in teaching fill the need for affiliation with groups and a cause. A person may become a teacher because of the need to be superior to someone, and children are the logical selection. The classroom

offers a place to exercise dominance and aggression without severe criticism. Those who desire to have children of their own find a sublimation of this drive by teaching children. Teaching permits a chance for some to live as their own repressed tendencies are inclined. The person who possesses a strongly developed superego is attracted to teaching. For those who have a need for self-punishment, teaching offers long hours and restricted lives. Teaching may even give the teacher an opportunity to project his own self-pity. The multiplicity of considerations presented in this study suggest many aspects to be avoided in school management. Quality of personality adjustments must be taken into account in selecting teachers. Supervisors should be allowed the time to give more attention to the individual teacher and his individual problems as they arise from day to day. Teachers should be relieved of anxiety and given greater security in their work. Every teacher should feel free to visit the supervisor's office for counseling on problems on which they feel they are in need of assistance. Finally, teachers should be encouraged toward self-exploration so that they may become aware of how their work is ministering to their psychological needs. The school which places stress on formalism and rigorous discipline will attract those who have needs to be aggressive and orderly. The personality of teachers today are those demanded by present educational systems. Teachers and schools are complementary.

If education were to change on a large scale so as to become more progressive and liberal, stated Symonds, it would attract different types of personalities as teachers.

Barr (6, pp. 1446-1454) stated that many of the assumptions underlying the research efforts to identify abilities, traits, and qualities contributing to teacher effectiveness are unsound. The thought that the effect of a given factor is relative to the situation in which it functions is noted in articles concerning research on teacher effectiveness. If this procedure is sound in identifying teacher competencies, efforts should be directed toward determining those teacher traits, abilities, and qualities which make teaching success in different areas and situations. It may be possible to find patterns of indicators which have high correlations with teaching effectiveness in a number of teaching situations. Many studies have sought to identify qualities essential to teaching success by computing the correlation between measures of qualities and measures of teacher effectiveness. Often, the traits investigated were defined only in terms of the measuring instrument used. It appears, however, that age, years of experience, and skill in handwriting approach zero in their correlation to teacher effectiveness. Several relatively high correlations have been reported for measures of personality traits. Barr advanced the educational philosophy that the teacher is a director of learning, a friend and

counselor of the students, a member of a group of professional workers, and a citizen participating in several community activities. With this philosophy of teaching in mind, Barr suggested that several criteria be considered as appropriate standards of teacher effectiveness. Ratings should be based on estimates of traits assumed to function in the art of teaching; for example, intelligence, drive, consideration for others, and emotional stability. Ratings may also be based on appraisal of activities included in effectiveness, such as discovering and defining pupil needs, setting goals, and stimulating interest. When properly controlled, determined measures of pupil gain are indicative of teacher effectiveness. Other methods of rating teacher effectiveness mentioned were student-teaching ratings, in-service ratings, college grades, and the consensus of judges.

Jarecke (17) discussed evaluation of teacher effectiveness through the use of a teaching judgment test. In a research project designed to develop a test to evaluate some of the factors contributing to teacher effectiveness, it was found that experience had a heavy bearing on success. There appeared to be a significant correlation between scholastic ability and teacher effectiveness as measured by the scale which was developed. These two criteria of teaching success should be given consideration when employing teachers and should also serve as future bases for counseling and guidance, according to Jarecke.

Grimm (15) stated that in teacher education three approaches have been used for improving the effectiveness of professional personnel. These approaches are effective selection, functional pre-service education, and in-service education. However, any of these approaches demands the definition of teaching competency. In order to choose candidates wisely, educate more appropriately, and promote growth through in-service training, some agreement is necessary concerning the qualities which society seeks in its teachers. Next, it is necessary that instruments and techniques be developed which will assist in collecting evidence pertaining to the degree to which teachers possess these qualities. Grimm's study presented two scales for the consideration of educators. The approach taken was one of getting within the individual teacher in order to determine how he autistically views the world. One scale sampled students' feelings directly on a personalized basis. It was constructed by utilizing remarks of students about their classroom experiences. The scale consisted of two hundred student responses toward some aspect of instructional environment. The student was asked to read each item carefully and decide whether or not it was the sort of remark he might make about the particular class in which he was tested. Each statement was marked "agree," "uncertain," or "disagree." Grimm stated that this scale might be used over a period of several weeks to measure the development of teacher effectiveness during student teaching.

Another scale containing seventy items arranged in random order utilized principals' ratings of characteristics of teacher effectiveness. The principals were supplied five different choices. An attempt was made to isolate a number of consistent clusters whose scores were meaningful in terms of teacher effectiveness. It was assumed that these scales would differentiate between teacher effectiveness on certain criteria of competency, defined in terms of pupil-teacher interpersonal relations. Such studies should reveal data regarding the area of pupil-teacher and pupil-pupil social and emotional relationships, Grimm stated, and should be helpful in giving a more complete description of desirable basic teaching competencies, at least those serving in the elementary and secondary schools.

Evans (12), in a critical survey of methods of assessing teacher ability, found that no highly satisfactory criteria of teacher effectiveness have emerged. Evans considered that the most suitable opinions for general use were those of experts. No suitable criterion for measuring pupil change has been developed. There is a need to measure not only knowledge gained, but also changes in attitude, ideals, purpose, and personality development. These changes may be due to effective teaching in other classes. There is considerable question whether or not the ability to get results is effective teaching; for example, cramming and other types of temporary learning

are obtained and then quickly forgotten. There is a possibility that teacher effectiveness ratings take into account too few of the relative factors of teaching success. Possibly, the best criterion of any teacher's work would be a composite measure based on pupil gains in information, ratings by competent supervisors, and a rating based upon the opinions of the students. With regard to variations in a teacher's performance when conditions are varied, any such assessment of teacher effectiveness should include a statement as to the type of student, class size, and subject matter being taught when the rating was made, according to Evans.

Barr (5) discussed the validity of various measures of teacher effectiveness to pupil change. Personality was found to possess a relatively high correlation of .30 to .35. Rating scales, when used by experienced and competent raters for the purpose of evaluating teacher effectiveness, achieved a correlation of .36 to .43. Social attitudes appeared to have a high correlation ranging from .29 to .38. School size appeared to possess significance in evaluating teacher effectiveness. Teacher-pupil relationship was positively correlated with teacher effectiveness, but not to the extent of statistical significance. Attitudes of teachers toward the teaching profession were positively related to teacher effectiveness, although not significantly. Measures of neurotic tendencies appeared to have a slight negative relationship

to teacher effectiveness. Dominance did not appear to be related to teacher effectiveness, yielding a correlation of .04. Social adjustment was not greatly related to teacher effectiveness, with a correlation of .10. The age and appearance of a teacher contributed little when measured against a criterion of pupil change, having a correlation of .01 to .10.

Barr (5) stated that leadership is negatively related to teacher effectiveness, while teacher effectiveness was found to be positively related to such scales as salary schedules, personal fitness, and general health. Inter-correlations were calculated between pupil change and each of the teacher-effectiveness measures. From these data it was possible to determine which measure possessed the most value as a criterion of teaching ability. Combinations of teacher effectiveness were found possible and some of these combinations may prove of great value in predicting teacher effectiveness, as well as assisting in the better training of teachers by teacher-education institutions.

Gragg (14) presented a survey of a teacher effectiveness rating plan which contained no numerical categories. Teachers were evaluated by superiors through the use of an instrument containing several major categories. The effectiveness of teachers' direct service to the pupils was judged on the basis of physical well-being of the pupils, teacher rapport,

organization of routine, appearance of the classroom, care of school materials, outside help to pupils, and avoidance of undue domination. Teaching ability was judged on the basis of preparation of lessons, effective use of questions, ability to teach self-discipline, ability to develop proper social atmosphere, skill in making assignments, and testing techniques. Contribution of the teacher to the total school program was evaluated by the degree of participation in school sports programs, traffic control, student organizations, school paper, faculty meetings, noon hour, bus duty, and other special assignments. Personal qualities of the teacher which formed a personality rating were cheerfulness, loyalty, sense of humor, honesty, truthfulness, integrity, sincerity, sympathy, and courage. The teacher's professional growth was judged on the basis of summer school attendance, conferences, in-service training, workshops, speaking engagements, community service, travel, and professional reading. A space was provided after each item for evaluator's comments, followed by a single evaluation for the items of "poor," "good," and "fair." Critical reflection upon the rating system described here revealed a high degree of subjective treatment and a marked lack of objectivity. Nowhere does one find a definite measure of pupil growth as a criterion for rating teacher effectiveness. Gregg shared with the teachers, who devised the procedure and formulated the standards, the belief that complete objectivity in teacher evaluation is impossible.

Ojeman (21) outlined what kind of teachers generally are effective in the classroom. Ojeman stated that teacher effectiveness cannot be altogether evaluated by taking into account pupil change and knowledge of subject matter. Effective teachers showed a combination of several factors. Supervisors should evaluate whether a teacher is interested in working with children rather than dominating them; that is, whether he attempts to guide them by fear, ridicule, sarcasm, and partiality, or by acceptant-democratic procedures. Teacher effectiveness should be identified by the manner in which the teacher conducts himself in the classroom situation.

Tompkins (29), in a study emphasizing technique and procedure, presented the persistent dilemma between teacher ratings and the present trend of rating schemes and theory. From 1929 to 1950, there were at least 569 individual magazine articles, brochures, research papers, books, dissertations, and other publications on the topic of rating teacher effectiveness. Tompkins stated that the literature offered many approaches to the rating of teacher effectiveness, one of which was a checklist to be completed by principals and superintendents, and approved by the board of education. This procedure was always followed by a conference between the teacher and the principal. Often, teacher effectiveness was plotted against a teaching profile containing certain criteria of desirable personal traits considered necessary to effective teaching. A self-evaluation, prepared by the administration

with a committee of teachers, was sometimes used in rating teacher effectiveness; the purpose was to enable the teacher to project and gain insight into his weaknesses and strong points. Subjective and descriptive appraisal in paragraph form was used, following observation of the teacher's effectiveness. This procedure was frequently used as a criterion for salary increments. Teachers sometimes were asked to evaluate co-workers by a checklist prepared collectively by teachers and principals. Teacher evaluation by pupils was frequently used within one class, and sometimes throughout the entire school. It was considered important to evaluate teacher effectiveness in terms of professional preparation, study, and years of service. Evaluation of the school faculty through its participation in, and contribution to, the total educational program is often made by the principal and the superintendent. On occasion, evaluation of teacher effectiveness is undertaken by the individual teacher and an outside consultant. Teachers are, and always will be, rated on effectiveness by fellow teachers, supervisors, pupils, parents of pupils, and lay citizens. Few will deny the desirability of some kind of continuing evaluation of teacher effectiveness. The problem is acute and the question is: what is the proper approach to evaluation? There is increased mention of the complex factors involved. Tompkins stated that there appears to be a growing concern for the moral factor-- the effect of the rating upon the teacher. Likewise, there

is currently an increased tendency to recognize self-evaluation and cooperative group evaluation as more productive of valid results.

Beecher (7) stated that the judging of teacher effectiveness should be based on a thorough evaluation of teaching as an essential function of supervision. Beecher emphasized the importance of having evaluations reviewed by teachers, supervisors, and administrators, as a constructive and cooperative guidance procedure aimed at the improvement of instruction. Rating of teacher effectiveness may be achieved through planning and execution procedures which act to dispel teacher fear of the results. Teacher rating, to be valid, must be composed of the basic objectives of teaching--pupil change, community efforts, and general educational improvement. Ratings must include a comprehensive analysis of services rendered, both concrete and intangible. The basic concepts of evaluating teacher effectiveness maintain that evaluation is a cooperative process, with both teachers and supervisors taking part. The over-all concept of the program should be one of guidance based on adequacy and availability of evidence. For the most effective outcome from rating, they should be conducted on a continuous rather than a periodic basis, and the teacher should be informed in a constructive manner aimed at improving his services to the pupils. Care should be taken to insure validity and reliability in the method utilized for gathering objective data. Data derived from different sources should be

assigned its relative weight and score in order to obtain a weighted composite of the teacher's effectiveness. Teacher effectiveness can be scientifically evaluated only if principles applicable to proper methodology are rigidly followed. Ratings have frequently been subjective and inadequate. Recognizing that teaching is the most important factor in the education of boys and girls within the school, Beecher said, what greater challenge exists for the supervisor than to guide the improvement of teaching through effective application of the science of evaluation?

Albert (1) conducted an analysis of teacher ratings by pupils who were asked to nominate the teacher they liked best and to list the traits they liked best in teachers. Teacher traits listed by the pupils differed from those listed by the supervisors. Albert stated that pupil ratings of teachers proved to be reliable, valid, practical, and inexpensive, and should be of benefit to teachers. Some of the boys and girls were found to like a certain teacher best, and they mentioned which teacher had done the most for them. Albert stated that, for maximum effectiveness, it might prove worthwhile for a teacher to know the comparative estimates of the administrators, fellow teachers, and pupils, as such information could present a nonbiased picture of the individual teacher's effectiveness.

Wilson (30) reported the result of student evaluations in a higher educational setting. Student ratings were found to be an effective method of discovering, for remedial purposes,

weaknesses in teachers. There was no significant difference between ratings given to men and women teachers. The method was found to be less satisfactory in large classes than for classes of under forty pupils. It was also determined that teachers did insufficient outside reading, and that classes should be composed of students selected by ability and interest in order that the instructor may gear his teaching to a limited area.

Seago (25) described a study concerning prognostic tests and teaching success, in which correlations of student-teacher ratings and tests of art judgment, musical talent, intelligence, emotional maturity, interest in teaching, social attitudes, and leadership were computed. The correlation coefficients between the ratings of teacher effectiveness and the prognostic variables ranged from $-.40$ to $.63$, indicating that further study could identify adequate predictors of teaching effectiveness. Seago stated that these predictive variables could be incorporated into a prognostic teaching scale.

Bossing (9) stated that the field of education has become conscious of the need to develop better means of evaluating teacher effectiveness; two broad trends have been noticed in an effort to devise methods of identifying teacher effectiveness. Bossing attempted to discover effective teacher traits and to devise tests of a general nature. Intelligence,

general scholarship, and achievement in professional courses have shown rather low correlations with teaching success. Practice teaching experience alone has shown a significant relationship to later teacher effectiveness. Unfortunately, this factor alone does not possess a highly predictive capacity of ultimate success and, as practice teaching comes at the close of the training period, it is of little value in selecting those who should enter the teaching profession. Bossing found that student teaching marks had a correlation of .69; professional education marks, .19; and general course marks, .17. The attempt to devise tests for measurement of teacher effectiveness appeared to hold the best over-all promise. Adequate curricula cannot be provided with confidence until better knowledge is available concerning those elements of training contributory to success in teaching. Further careful research would appear to be the prerequisite to the solution of the problem.

Somers (26, pp. 22-56) discussed the relationship between student teaching marks and rating of teacher effectiveness for the first year of teaching. Two measures of teaching experience in the training situation were obtained: the composite ratings of supervisors and the ratings of department heads. Each official was asked to rate each of the student teachers' effectiveness on the various items on the rating scale. The rating scale included four main categories

of questions: personal qualities, teaching qualities, managing qualities, and community-force qualities. Measurements of the first year of teaching experience after graduation were secured in the same manner and by the same instrument as those for the training school work. The scoring of ratings of teacher effectiveness and computation were also the same. The principal's ratings were considered of most worth, since the nature of his position gives him more frequent opportunity to observe the work of his teachers; and his ratings were assigned the weight of both the superintendent's and the supervisor's in the final average score. The two sets of ratings were found to have a correlation of .70. Measuring a teacher's effectiveness by the ratings of the supervisory staff may not be satisfactory. Assuming that a teacher's worth is consistent to the desirable changes brought about in pupils, the shared relations with co-workers, and his relation to the community, such a measure would be but a partial indication of his real worth. Ratings may be accepted as fairly precise indices of a teacher's influence on his fellow teachers and as partial indices of the increased enrichment of the community life due to his activities, but it may not follow that proportional changes in pupils are concomitant results. The correlation may be positive and considerable, but it is appropriate to place it well below perfect. Confidence in teacher effectiveness research is justified in

the progress made so far; however, many comprehensive investigations may be required prior to the major problems of educational and vocational guidance have been solved. Only by complete and thorough experimentation with action situations, as they are found and as they are in practice, will the true picture of the effective teacher be revealed, according to Somers.

A survey of the related literature has revealed a dearth of clear-cut results in research, which may be attributed to such aspects as difficulty of controlling important variables, the lack of adequate measuring devices, and the lack of a well-formulated theoretical basis for effective research. Only from a systematic and theoretical approach can there be developed testable hypotheses that will ultimately contribute to greater understanding of the definition of the educational process, factors contributing to success in teaching, and valid and reliable measures of teacher effectiveness.

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CHAPTER III

PRESENTATION OF DATA

Collection of Data

This study has utilized the elementary teaching predictive capacities of temperament, intelligence, and grade-point averages, and has evaluated their predictive significance with the aid of a rating scale designed for this purpose. A number of studies have emphasized the teaching effectiveness predictive value of these factors. According to the experimental evidence in favor of the teacher effectiveness predictive capacities of temperament, intelligence, and grade-point average, this study was designed by utilizing all three as a constellation for classification purposes.

Ryans (4, p. 47), in a study distinguishing the superior from the poor teacher, stated that experimental research has shown a significant correlation between adjustment factors of sociability, emotional stability, cooperativeness, and teacher effectiveness. As compared with poor teachers, superior teachers score higher on instruments measuring these criteria of teaching success.

The Guilford-Zimmerman Temperament Survey (1)--factors S (sociability-seclusiveness), E (emotional stability-instability), and P (cooperativeness-intolerance)--was used

for classification of the sample population. The Guilford-Zimmerman Temperament Test Manual (2) explains the above psychological criteria as follows:

Sociability. This score should be useful in vocational and personal counseling wherever the trait of social participation is a consideration. The high and low scores indicate the contrast between the person who is at ease with others, enjoys their company and readily establishes intimate rapport, versus the withdrawn, reserved person who is hard to get to know. The relation of this score and the ratings of supervisory performance is so low that by itself it is of little value in this connection. If the field of selection were narrowed to two candidates who were otherwise apparently of equal promise, the one with the higher C score on S (especially if one is 5 or above and the other is below 5) might be chosen. Relatively little attention might be paid to this trait score if the particular assignment calls for a minimum of social participation.

Emotional stability. A high score indicates optimism and cheerfulness, on the one hand, and emotional stability on the other. A score here that is very high, however, if coupled with a low general activity score, may indicate a sluggish, phlegmatic, or lazy individual. A very low score is a sign of poor mental health in general; in other words, a neurotic tendency.

Personal relations. Of all the scores, this one has consistently correlated highest with all criteria involving human relations. It seems to represent the core of getting along with others whether on the same or on a different level of organizational hierarchy. A high score means tolerance and understanding of other people and their human weaknesses. A low score indicates fault-finding and criticalness of other people and of institutions generally. The low scoring person is not likely to get along with others. So positive is the indication that it would seem to be a good rule not to appoint anyone to a supervisory position who has a C score below six. This recommendation has been made from the first, and there has been little reason to change it. Above a score of five, it would seem that the higher the P score the better, even to one of nine, and possibly ten, other things being equal.

The C scores are standard scores utilized to give the position of the raw score obtained by the subject. The below-average range is 0 through 3; the average range is from 4 through 6; and the above-average range is 7 through 10. These limits were adopted for classification categories of the sample population. The C scores and their respective raw scores are presented on the profile chart in Figure 4. (See Appendix, p. 87.)

The Otis Quick-scoring Mental Ability Test: Gamma Test, Form Am (3) provided the classification data for intelligence, and the North Texas State College permanent records were used to obtain grade-point averages. It was hypothesized that the effectiveness of beginning elementary teachers, as rated by their immediate superiors and college coordinators of student teaching, would vary significantly among three group levels, as listed in Table III.

TABLE III

LEVELS OF SAMPLE POPULATION CLASSIFIED BY THE OTIS QUICK-SCORING MENTAL ABILITY TEST, GUILFORD-ZIMMERMAN TEMPERAMENT SURVEY, AND GRADE-POINT AVERAGE

| Group Level | Otis Raw Score | Guilford-Zimmerman C Score | Grade-Point Average |
|---------------|----------------|----------------------------|---------------------|
| Above average | 59-80 | 7-10 | 2.2-3.0 |
| Average | 47-58 | 4-6 | 1.6-2.1 |
| Below average | 0-46 | 0-3 | 1.0-1.5 |

In order to determine the identity of elementary education graduates during the 1958-59 and 1959-60 academic years, commencement lists were obtained from the School of Education. An alphabetical list was made for each academic year.

Classification data on temperament, intelligence, and grade-point average were obtained for each graduate. Permission to use the Admissions Committee's records for procuring classification was obtained during the initial design of the study.

Members of the Admissions Committee indicated various subjects who might possibly qualify for the different group levels. Members of the Admissions Committee who served as college coordinators of student teaching indicated the geographic location of groups of graduates who were feasibly located for personal interview with their immediate superiors. In cases where Admissions Committee records were not available for graduates on the alphabetical list, various members of the Admissions Committee provided classification data from class records. Classification data proved to be available for the large majority of graduates of the 1958-59 and 1959-60 academic years.

The next information gathered was the location and name of the school in which each beginning elementary teacher was teaching. Permission to use the records of the North Texas State College Placement Office was also obtained during the initial design of the study.

For each of the 1958-59 and 1959-60 graduates who was found to fit one of the three group levels classified by temperament and intelligence, the home address was obtained from the address files in the Placement Office. The name and address of each elementary teacher was secured from current rosters of teachers employed by the various school districts in the state of Texas.

Seventy-five subjects who were located at the most feasible driving distance were chosen, and their grade-point averages were computed from permanent records in the Office of the Registrar at North Texas State College. Permission to do so had been obtained earlier. The grade-point averages were computed by adding the semester hours and the grade points earned from college entrance to graduation. The grade points were then divided by the semester hours to arrive at a grade-point average for each graduate. The result was seventy-five subjects classified equally into each of three group levels by temperament, intelligence, and grade-point average.

In view of the experimental evidence for the reliability and validity of a well-designed rating scale concerning teacher effectiveness, the interview technique was chosen as the method for gathering evaluation data on the selected sample subjects.

The utilization of the interview technique and a rating scale has certain advantages and disadvantages in collecting

evaluation data relative to teacher effectiveness. Vassey (5, pp. 68-70) discussed the more important of these in a similar study; they are presented below as they apply to this study. The superiority of the interview technique for the purpose of this study is found in the following five statements:

1. The interview technique permits control of the sample.

This was illustrated in Chapter I where the limits of the population were described according to (a) geographic location, (b) years of teaching experience, (c) teaching field, (d) sex, (e) teacher certification, and (f) selection variables.

2. Information of wider scope and complexity can be obtained through interviewing. The questionnaire-interview form for beginning elementary teachers was two pages in length and included eleven items concerning the degree to which the beginning elementary teacher exhibits behavior associated with (a) identifying pupil needs, (b) choosing appropriate learning experiences, (c) providing for individual differences, (d) creating favorable mind-sets and motivation, (e) making activities meaningful, (f) analysis and organization of learning experiences, (g) setting and defining goals, (h) direction of group activities, (i) proper teacher-pupil relations, (j) use of appropriate learning aids, and (k) evaluation of pupil growth and development. Also, five related factors were assessed. They were (a) interviewees' title, (b) grade

assignment of the teacher, (c) teacher's age, (d) teacher's marital status, and (e) school enrollment.

3. The interview method capitalizes upon the personal approach. The personal contacting of immediate administrative superiors and college coordinators of student teaching was the major reason for following up the sample population in the field. The positive responses of the interviewees reinforced the value of the personal contact approach.

4. The interview procedure affords a high degree of accuracy through acquisition of evaluation data direct from the source. The immediate superiors and the college coordinators of student teaching were the primary sources. Their ratings on each of the criteria were recorded as (a) superior, (b) good, (c) fair, (d) poor, and (e) inferior. This procedure avoids any subjective rating of narrative material by a secondary source.

5. The interview technique offers the opportunity to check personally the information acquired. This statement is allied with the previous one on the matter of accuracy. The personal check, however, assures a control of the completeness and accuracy of data acquired.

The disadvantages of the interview technique are fewer, but their significance makes them worthy of mention.

1. The interview procedure is somewhat inefficient because it gives the respondent little time for reflection.

Admittedly, the interviewees had little briefing before presentation of the evaluation criteria. Their answers were spontaneous. Deliberation had to be within ten to sixty minutes of time.

2. The use of the interview technique necessitates a small sample. This study utilized seventy-five beginning elementary teachers. The adoption of the interview technique as a valuable control prohibited the visitation of the immediate superiors of all the graduates of the 1958-59 and 1959-60 academic years. Beginning elementary teachers graduating from North Texas State College during these academic years were located not only throughout the state of Texas, but in other sections of the United States as well.

3. The subjective factor in the interview approach affects inaccuracies in the evaluation data. The interviewer is responsible for the controlled procedure by which he obtains the evaluation data. He may cause bias through emphasis on particular words and by misreading or interpreting the questions. In identifying and discussing the subject, a positive or negative opinion may be conveyed by the interviewer to the interviewee.

4. Proper rapport with the interviewees must be established. Difficulty may arise in the establishment of proper rapport under conditions of limited time.

Prior to conducting the evaluation interviews with the immediate superiors, the following requirements were stipulated

concerning who may properly evaluate the teaching effectiveness of the sample population:

1. The person who evaluates the teaching efficiency of the sample subjects must be the official immediate superior.

2. The immediate superior who evaluates the teaching effectiveness of the sample subjects must have had sufficient classroom contact with the sample subjects to permit valid ratings.

3. The immediate superior must have supervised the teaching of the sample subject for a period of at least five months.

In school systems large enough to employ a superintendent, his permission to visit the schools and contact the immediate superiors was obtained.

Each immediate superior was called upon in the field without an appointment. This procedure, of course, necessitated a second visit when circumstances did not permit an interview on the first visit.

Since the college coordinators of student teaching were located on the campus of North Texas State College, appointments were made at times convenient to them, and rating interviews were completed.

The interview procedure for both the immediate superior and the college coordinator of student teaching was standardized and controlled from interview to interview. After

a social introduction, the nature and significance of the requested interview was explained. The interviewees were told that the field follow-up was an attempt to isolate and identify a constellation of personal predictors of teaching effectiveness. They were also informed that the study was to be submitted for partial fulfillment of the requirements for the Doctor of Education degree at North Texas State College. The letter of introduction from the Dean of the School of Education, shown in Figure 3, was presented at this time. (See Appendix, p. 86.) The interviewees were assured that the results of the interview would be kept confidential. This was accomplished in part by assigning a code number to each rating scale, rather than the subject's name. After a short rapport-establishing exchange of conversation, the interviewee was given a rating scale by which to make his ratings on the subject named to him at this time. The rating on each criterion was recorded by the interviewer. Additional general information was also recorded by the interviewer.

Classification of Data

The sample population utilized in the study were located geographically in the northeast and west central areas of Texas. Table IV shows the geographic distribution in each area. Each of these areas represents a concentration of population and consequently employs a large percentage of the graduating teacher-education students each year. This

TABLE IV
GEOGRAPHIC LOCATION OF THE SAMPLE POPULATION

| Geographic Location | Frequency |
|-----------------------------|-----------|
| Northeast Texas | 54 |
| West central Texas. | <u>21</u> |
| Total. | 75 |

concentration of the sample population was also at a feasible driving distance, making these two areas prime locations for the field follow-up.

The large majority of the sample population was rated in the field by elementary school principals. However, in some cases the immediate superiors were teaching principals and elementary supervisors. The distribution of the immediate superiors' titles is presented in Table V.

TABLE V
TITLE DISTRIBUTION OF THE IMMEDIATE SUPERIORS

| Title | Frequency |
|---------------------------------|-----------|
| Principal | 65 |
| Teaching principal. | 4 |
| Elementary supervisor | <u>6</u> |
| Total | 75 |

In several instances, an immediate superior was requested to rate two of the sample subjects. Also, on occasion, an

immediate superior was disqualified on the basis of not having worked with the teacher closely enough to rate the teacher's effectiveness. In such cases, the subject was dropped from the sample population and another selected for replacement. The tabulation of frequency indicated that the greater percentage of the immediate superiors who rated the effectiveness of teachers were principals.

The sample population was found to have an age range from twenty-two to forty-eight years. This is quite possibly attributed to the fact that the sample population was composed of first- and second-year teachers. Several of the sample population were older women who had become teachers after rearing their children. The age distribution and frequencies are presented in Table VI.

TABLE VI
TEACHER AGE DISTRIBUTION

| Age Range | Frequency |
|-----------------|-----------|
| 40-49 | 3 |
| 30-39 | 6 |
| 25-29 | 28 |
| 20-24 | <u>58</u> |
| Total | 75 |

As was expected, the major age bracket of the sample population was between twenty and twenty-five years. It was felt that extending teaching experience to two years contributed to the maturity of the sample population group.

Most of the sample population were found to be married. This was not unusual, considering that the majority of the teachers were between twenty-two and twenty-nine years of age. Most of those found to be single were in the age range from twenty-two to twenty-four years. The marital status of the sample population is presented in Table VII.

TABLE VII
MARITAL STATUS OF THE SAMPLE POPULATION

| Marital Status | Frequency |
|-------------------|-----------|
| Married | 41 |
| Single | <u>34</u> |
| Total | 75 |

The relatively equal division of the sample population's marital status between "married" and "single" presents a more representative sample with respect to this variable.

Enrollment of the elementary schools visited ranged from approximately eighty to fifteen hundred pupils. The majority of the schools was located in urban districts; however, several were in rural areas. Those schools located in rural areas were often supervised by teaching principals. Also, the schools with smaller enrollment tended to be located in rural areas. For purposes of presentation, the enrollments of the schools were divided into seven categories. The classification of category was determined by enrollment in grades one through

six. The majority of the schools were separate units; however, some were housed with junior high schools and kindergartens. The enrollment distribution in the schools in which the sample population was teaching is presented in Table VIII.

TABLE VIII
PUPIL ENROLLMENT OF SCHOOLS VISITED

| Category | Frequency |
|----------------------|-----------|
| 0-99 | 1 |
| 100-149. | 1 |
| 150-249. | 6 |
| 250-499. | 16 |
| 500-749. | 29 |
| 750-999. | 14 |
| 1,000-1,500. | <u>8</u> |
| Total | 75 |

Since the majority of the elementary schools visited was located in the metropolitan areas of Dallas and Fort Worth, Texas, it was suspected that the enrollments would be large. The tabulation of the enrollment size of the elementary schools visited yielded a distribution resembling normal.

Quantifications of the ratings of the effectiveness of beginning elementary teachers by classification levels are presented in Table IX.

TABLE IX

QUANTIFICATION SCORES BY GROUPS OF THE RATINGS OF TEACHER EFFECTIVENESS BY IMMEDIATE SUPERIORS, COLLEGE COORDINATORS, AND COMPOSITE TOTAL

| Group Levels | | | | | | | | |
|--------------------|---------------------|-----------------|--------------------|---------------------|-----------------|--------------------|---------------------|-----------------|
| Below Average | | | Average | | | Above Average | | |
| Immediate Superior | College Coordinator | Composite Total | Immediate Superior | College Coordinator | Composite Total | Immediate Superior | College Coordinator | Composite Total |
| 37 | 33 | 70 | 38 | 47 | 85 | 50 | 48 | 98 |
| 27 | 27 | 54 | 54 | 39 | 93 | 55 | 50 | 105 |
| 31 | 27 | 58 | 44 | 33 | 77 | 45 | 55 | 100 |
| 26 | 21 | 47 | 45 | 44 | 89 | 48 | 55 | 103 |
| 28 | 23 | 51 | 53 | 51 | 104 | 53 | 55 | 108 |
| 26 | 32 | 58 | 39 | 48 | 87 | 48 | 40 | 88 |
| 41 | 40 | 81 | 32 | 25 | 57 | 55 | 45 | 100 |
| 28 | 31 | 59 | 40 | 36 | 76 | 40 | 38 | 78 |
| 34 | 16 | 50 | 42 | 48 | 90 | 45 | 31 | 76 |
| 32 | 34 | 66 | 46 | 46 | 92 | 44 | 22 | 66 |
| 30 | 29 | 59 | 36 | 33 | 69 | 55 | 50 | 105 |
| 26 | 27 | 53 | 49 | 45 | 94 | 48 | 45 | 93 |
| 25 | 22 | 47 | 39 | 22 | 61 | 40 | 23 | 68 |
| 29 | 33 | 62 | 40 | 42 | 82 | 44 | 55 | 99 |
| 46 | 32 | 78 | 49 | 41 | 90 | 38 | 50 | 88 |
| 39 | 41 | 80 | 37 | 32 | 69 | 51 | 33 | 84 |
| 36 | 44 | 80 | 40 | 49 | 89 | 55 | 55 | 110 |
| 35 | 29 | 64 | 47 | 37 | 84 | 51 | 44 | 99 |
| 36 | 30 | 66 | 38 | 40 | 78 | 35 | 39 | 74 |
| 38 | 17 | 55 | 37 | 41 | 78 | 48 | 40 | 88 |
| 49 | 48 | 97 | 43 | 38 | 81 | 50 | 49 | 99 |
| 29 | 28 | 57 | 44 | 31 | 75 | 55 | 43 | 98 |
| 42 | 39 | 81 | 42 | 36 | 78 | 45 | 42 | 87 |
| 38 | 33 | 71 | 48 | 40 | 88 | 43 | 49 | 82 |
| 44 | 43 | 87 | 38 | 42 | 80 | 52 | 44 | 96 |

The ratings of each of the sample population were quantified by assigning weights of 5 to "superior," 4 to "good," 3 to "fair," 2 to "poor," and 1 to "inferior." Each rating scale was summarized by adding the eleven different ratings on each scale.

The scales were placed into the three classification levels of "below average," "average," and "above average," determined by temperament, intelligence, and grade-point average. Raw data totals for each group classification level were then tabulated by adding the scale totals for each group. The totals of the effectiveness ratings of beginning elementary teachers by classification levels are presented in Table X.

TABLE X
QUANTITATIVE TOTALS OF EVALUATIONS BY GROUP
CLASSIFICATION LEVELS

| Group Level | Composite Totals |
|-------------------------|---------------------|
| Below average | 1,631 |
| Average | 2,135 |
| Above average | 2,288 |

These raw data totals indicate the absolute differences between the three levels of group classifications. As expected, the above-average group received higher ratings than

the average group; and, in turn, the average group received higher ratings than the below-average group.

The following chapter presents a statistical analysis of the raw data resulting from the ratings of teacher effectiveness by their immediate superiors, including the method of statistical treatment and presentation of the statistical findings.

CHAPTER BIBLIOGRAPHY

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CHAPTER IV

ANALYSIS OF DATA

Statistical Treatment of Data

The raw score data presented in Table IX were tabulated to test the hypothesis that the effectiveness of beginning elementary school teachers as rated by their immediate superiors and coordinators of student teaching will vary significantly among three group levels classified by the Otis Quick-scoring Mental Ability Test: Gamma Test, Form Am; Guilford-Zimmerman Temperament Survey, factors S (sociability-seclusiveness), E (emotional stability-instability), and P (cooperativeness-intolerance); and grade-point average.

The testing of the hypothesis facilitated answering the following questions:

1. What is the relationship between the level of teaching effectiveness of the sample population of elementary school teachers trained by the School of Education at North Texas State College, and the "personal selection" traits of temperament, intelligence, and grade-point average?

2. Are the individual group classifications of "below average," "average," and "above average" significantly different groups on the basis of ratings of teacher effectiveness?

Three different statistical comparisons of below-average, average, and above-average groups were made. The three comparisons utilized ratings of teacher effectiveness by the immediate superiors, college coordinators of student teaching, and a composite total of these ratings.

The statistical technique used was simple analysis of variance with the F ratio. A test for a significant gap between means was applied to the composite test of the hypothesis.

The quantified data yielded by the ratings of immediate superiors were tabulated to test the hypothesis and are presented in Table XI.

TABLE XI
SUMMARIES OF QUANTIFIED RATINGS BY IMMEDIATE SUPERIORS

| Component | Below Average | Average | Above Average | Totals |
|----------------|---------------|-----------|---------------|-----------------------------------|
| m | 25 | 25 | 25 | N = 75 |
| ΣX | 852 | 1,051 | 1,193 | $\Sigma \Sigma X = 3,096$ |
| ΣX^2 | 30,166 | 45,662 | 57,721 | $\Sigma \Sigma X^2 = 103,549$ |
| $(\Sigma X)^2$ | 725,904 | 1,104,601 | 1,423,199 | $\Sigma (\Sigma X)^2 = 3,253,704$ |
| means | 34.04 | 42.04 | 47.60 | $\bar{X} = 40.23$ |

Table XI lists the tabulated components of ratings by the immediate superiors necessary for statistical treatment by analysis of variance.

The quantified data yielded by the ratings of college coordinators were tabulated to test the hypothesis and are presented in Table XII.

TABLE XII
SUMMARIES OF QUANTIFIED RATINGS BY COLLEGE COORDINATORS

| Component | Below Average | Average | Above Average | Totals |
|--------------|---------------|---------|---------------|------------------------------------|
| m | 25 | 25 | 25 | N = 75 |
| $\sum X$ | 779 | 948 | 1,095 | $\sum X = 2,859$ |
| $\sum X^2$ | 25,875 | 40,184 | 49,869 | $\sum X^2 = 115,928$ |
| $(\sum X)^2$ | 606,841 | 968,256 | 1,199,025 | $\frac{(\sum X)^2}{N} = 2,774,122$ |
| means | 31.16 | 37.92 | 43.80 | $\bar{X} = 37.63$ |

Table XII lists the tabulated components of ratings by college coordinators necessary for statistical treatment by analysis of variance.

The quantified data yielded by composite total of ratings by immediate superiors and college coordinators were tabulated to test the hypothesis and are presented in Table XIII.

TABLE XIII
SUMMARIES OF QUANTIFIED RATINGS OF COMPOSITE TOTAL

| Component | Below Average | Average | Above Average | Totals |
|--------------|---------------|-----------|---------------|--------------------------------|
| m | 25 | 25 | 25 | N = 75 |
| $\sum X$ | 1,631 | 2,135 | 2,288 | $\sum \sum X = 6,054$ |
| $\sum X^2$ | 115,181 | 170,160 | 213,796 | $\sum \sum X^2 = 499,137$ |
| $(\sum X)^2$ | 2,660,161 | 4,558,225 | 5,234,944 | $\sum (\sum X)^2 = 12,453,330$ |
| means | 66.24 | 85.40 | 91.52 | $\bar{X} = 81.05$ |

Table XIII lists the tabulated components of the composite total of ratings by immediate superiors and college coordinators, necessary for statistical treatment by analysis of variance.

Statistical Results of Treatment of Data

The following is a summary of the results of statistical manipulation of component tabulation for ratings by the immediate superiors, college coordinators, and composite total of these ratings. Table XIV presents the variance estimates, as computed from Table XI, of the ratings of immediate superiors.

TABLE XIV

ANALYSIS OF VARIANCE DATA FOR RATINGS BY IMMEDIATE SUPERIORS
AS RESULTS OF STATISTICAL MANIPULATION OF DATA IN TABLE XI

| Source | Sum of Squares | df | Variance Estimate | F |
|---------|----------------|----|-------------------|-------|
| Between | 2,345.28 | 2 | 1,172.64 | .. |
| Within | -26,599.16 | 72 | 36.93 | .. |
| Total | 24,253.88 | .. | .. | 31.76 |

The F ratio of 31.76 was found to be significant beyond the .001 per cent level. This finding shows that the ratings of the sample population by immediate superiors varied significantly between below-average, average, and above-average groups classified by the personality constellation of temperament, intelligence, and grade-point average. It seems evident that when potential teachers are appraised on the basis of the personality constellation, their corresponding level of teacher effectiveness may be predicted.

Table XV presents the variance estimates, as computed from Table XII, of the ratings by college coordinators.

TABLE XV

ANALYSIS OF VARIANCE DATA FOR RATINGS BY COLLEGE COORDINATORS
AS RESULTS OF STATISTICAL MANIPULATION OF DATA IN TABLE XII

| Source | Sum of Squares | df | Variance Estimate | F |
|---------|----------------|----|-------------------|-------|
| Between | 2,056.03 | 2 | 1,028.01 | .. |
| Within | 4,963.12 | 72 | 68.03 | .. |
| Total | 7,019.15 | .. | .. | 14.91 |

The F ratio of 14.91 was found to be significant beyond the .001 per cent level. This finding shows that the ratings of the sample population by college coordinators varied significantly between below-average, average, and above-average groups classified by the personality constellation of temperament, intelligence, and grade-point average. This is further evidence that when potential teachers are appraised on the basis of the personality constellation, their corresponding level of teacher effectiveness may be predicted.

Table XVI presents the variance estimates, as computed from Table XIII, of the composite total of ratings by immediate superiors and college coordinators. The F ratio of 342.19 was found to be significant beyond the .001 per cent level. This composite finding controls one-rater bias and shows that ratings of the sample population by immediate

TABLE XVI

ANALYSIS OF VARIANCE DATA FOR RATINGS BY COMPOSITE TOTAL
AS RESULTS OF STATISTICAL MANIPULATION OF DATA
IN TABLE XIII

| Source | Sum of Squares | df | Variance Estimate | F |
|---------|----------------|----|-------------------|--------|
| Between | 9,454.32 | 2 | .. | .. |
| Within | 1,003.80 | 72 | .. | .. |
| Total | 10,485.12 | .. | .. | 342.19 |

superiors and college coordinators, combined, varied highly significantly between below-average, average, and above-average groups classified by the personality constellation of temperament, intelligence, and grade-point average. This test of the hypothesis is valid and reliable evidence that when potential teachers are properly appraised on the basis of the personality constellation, their corresponding level of teacher effectiveness may be predicted.

The test for a significant gap, as presented below, was utilized:

$$S G = (t_{.001}) (\sqrt{2}) (S \bar{x})$$

This statistical test yielded a significant gap boundary of 3.57. The gaps between the below-average, average, and above-average groups were found to be 19.16 and 6.12, both

of which were beyond the level of the significant mean boundary.

The hypothesis that the effectiveness of beginning elementary teachers will vary significantly among three levels of groups classified by temperament, intelligence, and grade-point average was sustained. Each of the statistical comparisons of ratings by immediate superiors, by college coordinators, and by composite total, was found to be significant beyond the .001 per cent level.

The statistical results answered affirmatively the questions posed by the hypothesis:

1. It was found that the elementary teaching effectiveness of the sample population, classified on the factors of temperament, intelligence, and grade-point average varied significantly beyond the .001 per cent level.

2. Each of the three classification groups--below average, average, and above average--were found to be in significantly different groups.

The statistical manipulation has yielded information on matters concerning selection and counseling of elementary teachers for adjustment to teaching. As a group, the factors of temperament, intelligence, and grade-point average were found to compose a constellation highly predictive of beginning teacher effectiveness.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The primary purpose of this study was to determine the relationship between the level of teaching effectiveness of beginning elementary school teachers and three selection traits.

The hypothesis was formulated that the effectiveness of beginning elementary teachers as rated by their immediate superiors and coordinators of student teaching will vary significantly among below-average, average, and above-average levels of groups classified by temperament, intelligence, and grade-point average.

The study involved a field follow-up of a sampling of seventy-five elementary education graduates who earned degrees in the School of Education at North Texas State College, Denton, Texas, during the academic years of 1958-59 and 1959-60. The sample population, all female, was located in the state of Texas.

To test the hypothesis, the levels of teaching effectiveness were evaluated by personal interviews with each elementary teacher's immediate superior and college coordinator of student teaching.

The resulting data were treated statistically by simple analysis of variance with the F ratio. Three separate statistical comparisons of below-average, average, and above-average groups were made. The three comparisons utilized ratings of teacher effectiveness by the immediate superiors and by college coordinators, and a composite total of these ratings.

It was proposed to isolate a more suitable method of identifying the prerequisites to teaching efficiency and more effective procedures for guidance of future elementary teachers receiving their training at North Texas State College, thereby enabling the School of Education to better serve the child, the home, and society.

Conclusions

The statistical manipulation has yielded information on matters concerning selection and counseling of elementary teachers for adjustment to teaching. It may be inferred from the findings that intelligence was predictive of teaching effectiveness as an indicator of the level of general ability. In turn, the temperament factors of emotional stability, sociability, and personal relations indicated the adjustment capacity for utilizing intelligence effectively in the teaching situation. Finally, the grade-point average was an index of the level at which the subject is actually operating. As a group, the factors of intelligence,

temperament, and grade-point average were found to compose a constellation highly predictive of beginning teacher effectiveness.

The positive findings of this study warrant the conclusion that when prospective teachers are properly appraised on the basis of the constellation of intelligence, temperament, and grade-point average, their corresponding level of teacher effectiveness may be predicted. As a group, prospective teachers may be reliably categorized as below average, average, and above average.

Finally, it is concluded that the Committee for Admission of Students to the Elementary Teacher Program of North Texas State College has developed the basis for a valid and reliable guidance program for the selection of elementary teachers.

Recommendations

On the basis of the findings of experimentation, the following suggestions are made:

1. It is suggested that superintendents and employment supervisors utilize the predictive capacities of the temperament, intelligence, and grade-point-average constellation when selecting teachers for employment.

2. It is suggested that school districts with high scholastic standards and the economic ability to pay attractive salaries utilize the predictive capacities of intelligence,

temperament, and grade-point average to identify and employ above-average potential teachers.

3. It is suggested that school administrators utilize the data concerning the prerequisites to successful teaching when conducting in-service training and counseling teachers on professional improvement.

4. It is suggested that college administrators utilize the predictive capacities of the prerequisites to successful teaching when admitting teacher-education students to advanced professional courses.

5. It is suggested that student personnel workers and instructors utilize the prerequisites to successful teaching when assisting students in planning professional and social development, and when counseling for adjustment to effective teaching.

6. Finally, it is suggested that further research be undertaken toward identifying the prerequisites to effective teaching utilizing the personality constellation in an endeavor to provide suitable criteria for measurement. Not until this has been accomplished will teacher-education institutions be able to select wisely and educate appropriately the great number of teachers our country demands.

APPENDIX

COLLEGE RECOMMENDATION FOR CERTIFICATION

CHECK: Mr. Mrs. Miss

NAME: _____
 Last First Middle Maiden Surname
 (if applicable)

ADDRESS: _____
 Street and Number City State

DATE OF BIRTH: _____

1. Is this person being recommended for a certificate(s) under the old certificate laws in effect prior to September 1, 1955?
 Yes No (If yes, attach official college transcript.)

2. Degree earned _____ Date conferred _____

3. For persons receiving secondary certificate, teaching fields are:
 First Teaching Field(s) _____
 Second Teaching Field(s) _____

4. (He, She) has the following credits in:
 a. Constitutions of United States and Texas _____ sem. hrs.
 b. American History _____ sem. hrs.
 or
 c. Texas History _____ sem. hrs.
 d. Practice Teaching _____ sem. hrs.
 (If not, two years of teaching experience must be verified on application-Item 9.)

5. (He, She) meets requirements for a _____ certificate.
 Provisional, Professional, or Old Type
 with an area of specialization in _____
 elementary, secondary, all-level (art, music, etc), or
 special service (Counselor, Supt., Deficient Vision,
 Librarian, etc.)

6. Date credit completed for this area of specialization _____

7. (He, She) is a citizen of the United States. Yes No

The qualifications of the above named person have been reviewed by the office designated by this institution to make certification recommendations. Having verified that the individual meets the necessary requirements, this institution recommends that (he, she) be certified to teach in the public schools of Texas.

The evidence secured by this institution indicates that the applicant is of good moral character. (If not applicable, delete.)

Witt Bain
 Signature of College Official Title College or University
 approved for recommendations.

 Date

January 3, 1961

TO: Selected Principals, Supervisors and Coordinators

FROM: Witt Blair, Dean, School of Education

This will introduce you to James O. Tate, a doctoral student and part-time teacher in this department. He is conducting a study for the College of our recent graduates who have gone into teaching. This is an extension of our regular follow-up study which for four years has been done by mail, directly to the teacher.

He wishes to get your opinion of the success of these graduates by means of an interview with you. In the interest of improving our program, will you give him a few minutes of your time?

Your help is appreciated.

Cordially,

Witt Blair, Dean

WB/jr

PROFILE CHART FOR THE GUILFORD-ZIMMERMAN TEMPERAMENT SURVEY

For high-school, college, and adult ages

| C SCORE | G | R | A | | S | E | O | F | | T | P | M | | CENTILE RANK | NEAREST T SCORE | |
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| | General Activity Energy | Restraint Seriousness | Ascendance | Social Boldness | Social Interest Sociability | Emotional Stability | Objectivity | Friendliness | Agreeableness | Thoughtfulness Reflectiveness | Personal Relations Cooperativeness | Masculinity | Femininity | | | |
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