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STUDENT TEACHING SUCCESS IN GRADES
FOUR, FIVE, AND SIX.**

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SELECTED FACTORS IN PREDICTING STUDENT TEACHING
SUCCESS IN GRADES FOUR, FIVE, AND SIX

by
Lionel Gerald Metivier

A dissertation submitted in partial fulfillment
of the requirements for the degree of
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CHAPTER I

INTRODUCTION

A constant challenge in the field of teacher training has been the attempt to establish a significant relationship between what are assumed to be qualities necessary for successful teaching and ultimate success in a classroom. Student teaching, coming as a terminal experience in the training program, is often interpreted by both staff and prospective employer as a predictor of future teaching effectiveness. The problem then becomes one of identifying successful student teachers and investigating the qualities which seem to relate to their effectiveness in a supervised classroom experience with children. If we can predict the probable success of student teachers we shall be in a better position to select, guide, and encourage students during their professional training.

There have been numerous studies in recent years which have attempted to correlate success in student teaching to various measures of academic achievement, mental ability, professional courses in education, personal traits, character, and physical fitness. Almost

all of these show some measure of positive association; however, many of the correlations are not statistically significant. Tyler (86, p. 308), in an evaluation of his work on the prediction of student teaching success, states:

The time has come when minor research in problems of teacher selection is not likely to contribute significantly to the present state of knowledge in this field. Investigations with 10 or 20 or 50 subjects without regard to such factors as their age, sex, teaching majors and preparation (i.e., elementary or secondary) are not likely to produce results that will improve our ability to predict teaching efficiency.

Michaelis (59, p. 477) makes the following recommendation:

There is need for a study of differences between primary and intermediate grade teachers. Differences in personality, attitude, and other factors may be found between those who work with beginners and teachers who work with older children.

Statement of the Problem

This study seeks to establish predictors of student teaching success through a comprehensive investigation of data from a selected group of student teachers in grades four, five, and six. The investigator proposes to compare success ratings in student teaching to information available from personality inventories, academic achievement, and experiences with children prior to student teaching.

The Design of the Study

Prior to the collection of data, six experimental hypotheses were established. The specific personality factors used in Hypotheses 1, 2, and 3 evolved from studies done by Norman (64) and Isaacson, McKeachie, and Milholland (41, 42). Norman was investigating the assessment of five culturally valued traits--surgency, agreeableness, dependability, emotional stability, and culture--using a peer group nomination technique.

In a study of teaching fellows in psychology, Isaacson found that teachers high on surgency, culture, and emotional stability, as judged by their peers, stood out as most likely to be seen in a good light by their students. These culturally valued traits were seen as possible correlates in elementary school teaching.

Hypotheses 4 and 5 were included to add dimensions not included in the personality inventories and from information available concerning each student teacher.

Hypothesis 6 was included to check on the relationship between successful student teaching and experiences with children prior to student teaching.

Hypothesis 1. Student teachers who receive the highest success ratings will also score highest on the following factors of the Guilford Zimmerman Temperament Survey:

- a. Ascendency
- b. Emotional stability
- c. Sociability
- d. Personal relations

Hypothesis 2. Student teachers who receive the highest success ratings will also score highest on the following factors of the Cattell 16 Personality Factor Questionnaire:

- a. Intelligence
- b. Conscientiousness
- c. Sensitivity
- d. Will power

Hypothesis 3. Student teachers who receive the highest success ratings will also score highest on the following factors of the Norman Peer Group Nomination Form:

- a. Culture
- b. Dependability
- c. Emotional stability

Hypothesis 4. Student teachers who receive the highest success ratings will also have the highest scores on the American Council on Education Psychological Examination.

Hypothesis 5. Student teachers who receive the highest success ratings will also have the highest University of Michigan grade-point scores.

Hypothesis 6. Student teachers who receive the highest success ratings will also have had the greatest number of contact hours with children prior to student teaching.

Selection of the Sample

Students used in this study were all seniors doing their student teaching during the first semester, 1960-61, at the University of Michigan. All of the subjects were females under twenty-four

years of age, enrolled in the School of Education, and doing their student teaching in grades four, five, and six. They had been approved by the Office of Student Personnel, which meant that they had completed the prerequisite courses for student teaching and had a C or better average for course work taken prior to student teaching. The subjects were assigned to schools in the Ann Arbor, Ypsilanti, Wayne, Willow Run, and Saline area. As a part of their contact, the students were required to meet on campus for one hour a week with a seminar instructor from the School of Education.

Sixty-two students were available during this semester. Five were eliminated from the final analysis: two because they were males, one changed student teaching assignments, and it was not possible to obtain complete information on two individuals. Of the accepted population, eighteen were assigned to the fourth grade, sixteen to the fifth grade, and twenty-three to the sixth grade.

Instrumentation and Collection of the Data

Personality Inventories

Three personality inventories were administered to the group. The Guilford Zimmerman Temperament Survey was taken by all of the students prior to their student teaching assignment, and all nine

factors were used. The Cattell 16 Personality Factor Questionnaire, Form A, was administered during the student teaching assignment, as was the Norman Peer Group Nomination Form, developed by Norman (64). A complete description of the three inventories is included in the Appendixes.

Rating Scales

Five scales were used to secure numerical scores of achievement in the student teaching contact. To facilitate the administration and collection of data the investigator developed forms that could be used as part of the final evaluation for all student teachers assigned to grades four, five, and six. A sample of each is included in the Appendixes.

Forms A, B, C, and D--supervising teacher, supervising principal, self, and college supervisor evaluation forms--were developed for the study after an extensive examination of rating scales used by teacher-training institutions and suggested rating techniques in the Thirty-ninth Yearbook of the Association for Student Teaching. The forms were designed to elicit responses on a ten-point scale in the following areas: the teaching of subject matter, rapport with children, rapport with adults, and personal qualities. Subject matter teaching was evaluated in terms of knowledge of the subject, planning for

instruction, techniques of presentation, adaptation of instruction to individual differences, motivation, and evaluation techniques.

A mean score was computed for each of the rating scales, and these scores then served as an index of each student's success in student teaching.

Form E, pupil evaluation, was developed by the investigator from suggestions made in studies by Rabinowitz and Rosenbaum (70) and McCall (55). Pupils were asked to rate their student teacher on a five-point scale. Ratings were made to the following statements: "I liked her." "Most of the class liked her." "She helped me learn." "I would like her as my full-time teacher next year."

The responses were tabulated for each of the four statements and a mean score was computed. This score served as an index of the student teacher's success as rated by the children in her class.

Other Measures Used in the Study

American Council on Education Psychological Examination

This examination was administered when the students enrolled at the University of Michigan. Two scores are given, quantitative (arithmetic) and linguistic. The sum of these two scores is then

given as the "A.C.E." score. Both a raw score and a Michigan percentile are given, but for purposes of this study, only the raw scores were used.

University of Michigan grade point

University of Michigan grade points are computed by dividing the honor points (A = 4, B = 3, C = 2, D = 1) by the semester hours of work done at the University of Michigan. Grade points were computed for the semester hours of work done at the university up to and including the semester preceding the student teaching assignment.

Experiences with children prior to student teaching

This list was devised by Emilio Edualino as part of a doctoral dissertation on the relationship between successful student teaching and pre-student-teaching experiences with children. The list represents suggestions made by the Subcommittee on Standards and Surveys, created by the committee of the American Association of Teachers Colleges (2). The experiences were grouped into the following six categories:

1. Scouting and camp counseling.
2. Church, "Y," 4H, etc.
3. Community activities.
4. Activities in connection with college courses.
5. Activities in high school.
6. Other college activities with children.

Appropriate examples were included under each category, with space to write in those activities that were not in the list but with which the student might have had contact. The form also included a check list to elicit the following information: the total hours devoted to each activity listed while in high school and after high school; the role played, whether as an observer, an active participant, a leader, or all three; and whether or not the student was supervised while engaged in these activities.

Specific Steps in Collecting the Data

The Cattell 16 Personality Factor Questionnaire was administered to all students enrolled in Directed Teaching in Elementary Education. The investigator administered the test to all seminar sections during the eighth week of the semester, and all tests were machine scored at the University of Michigan Testing Bureau.

The Guilford Zimmerman Temperament Survey scores were tabulated from the student files in the Office of the Recorder, School of Education, University of Michigan.

The Norman Peer Group Nomination Form was administered to all seminar sections during the thirteenth and fourteenth weeks of the semester. Because this was to be a peer nomination, the following steps were taken to facilitate the administration of the form.

1. Students were seated in a circle facing the center of the room.
2. The seating was arranged alphabetically and by number.
3. Each student was given an alphabetized list of the students in the section and each name had a corresponding number.
4. Each student had a large number on her desk corresponding to the alphabetized list.

The check list "Experiences with Children Prior to Student Teaching" was administered to all seminar sections during the thirteenth week. The students were given information about the list and asked to take it home and to return it at the next seminar meeting. The classroom information was a clarification of the directions given on the check list. The data gathered from the list were carefully tabulated, obtaining the total number of hours spent in each category of activities by combining the individual entries. A total was found for the hours of contact while in high school and for the hours after leaving high school and while in college.

Coordinator for Directed Teaching in Elementary Education

Lowell W. Beach contacted the principal of every school used in the study. Each principal was asked to arrange a schedule that would allow the investigator to observe the student teachers for a full thirty minutes. During this thirty-minute period the student teacher was to be in charge of a group or class. It was further suggested

that the student teacher be responsible for one of the following subjects: reading, language arts, arithmetic, science, social studies.

All schools complied with this request.

Each student was observed for a full thirty minutes and was then rated by the investigator on the college supervisor evaluation form.

The supervising teacher evaluation form was mailed to all cooperating schools during the week of January 16, 1961. An accompanying letter to the principal requested that the supervising teachers use the new form as part of their regular evaluation procedure. All evaluations were returned to the coordinator for directed teaching in elementary education by the fifteenth week of the semester.

During the fifteenth and sixteenth weeks the investigator visited each cooperating principal to explain the use of the two evaluation forms--supervising principal evaluation, and pupil evaluation of the student teacher. The principal was asked to use the form without contacting the supervising teacher. It was further requested that the pupil evaluation form and accompanying instructions be distributed after the student teacher had completed her assignment and the final grade had been forwarded to the campus.

Each principal was informed that the results of both evaluations would not change the final grades but were an attempt to

develop evaluation techniques for possible further use. The forms were personally collected by the investigator a week after the completion of the semester.

A notice was sent during the fifteenth week of the semester to all student teachers that upon completion of their assignment they were to report personally to the investigator. At that time, each student was asked to complete the student teaching self-evaluation form. All students were personally assured that the results would not change the final grade, as this had already been submitted and posted.

Statistical Method Employed To Examine the Data

The multiple regression technique was used to analyze the data. A multiple regression equation serves to sum up all the evidence of a large number of observations in a single statement. The equation expresses in condensed form the extent to which differences in the dependent variable tend to be associated with differences in each other variable. The five rating scales were treated as the dependent variables, and the personality inventories, A.C.E. scores, experiences with children, and grade point were treated as independent variables.

Regression Analysis Program

The objective of the regression analysis program is to generate a linear regression equation of the form:

$$(1) \quad Y = b_0 + b_1 X_1 + b_2 X_2 + \dots + b_k X_k$$

from a set of N observations of a set of k independent variables $(X_1, X_2, \dots, X_k)$ and a single dependent variable Y .

The coefficients $b_0, b_1, \dots, b_k$ are determined so that the regression equation minimizes the sum of the square of the deviations between the observed and the predicted value of Y . The method used is the stepwise regression procedure which generates the expression (1) above, variable by variable, in order of relative importance until all significant variables are included in the equation, according to the level of significance specified by the user. The details of the procedure used may be found in the manual, "Stepwise Regression Program on the IBM 704," by James E. Dallemund, G.M.R.-199, General Motors Research Staff.

CHAPTER II

RELATED RESEARCH STUDIES

Serious attempts at predicting the success of future teachers is by no means new to the field of education. As early as 1905, Merriam (58) used a sample of 1,185 normal school graduates in an attempt to show the relationship between professional scholarship and teaching ability. He declared the relation as only "slightly prophetic" and this term seems to have set the stage for the many pieces of research to be done in all phases of success prediction in education.

From this first attempt to lift the prognosis of teaching ability out of the field of opinion and into the area of research and objective measurement has developed a wealth of studies and literature in the area of student teaching and teacher prediction. Barr (4), in a summary of investigations dealing with the measurement and prediction of teaching efficiency, reported more than two hundred references to positive relations between personality characteristics and some criterion of teaching success. Basically, studies dealing

with the prediction of future teaching success have centered around the use of intelligence, scholarship, and personality as predictors. Success has been measured in terms of ratings by supervising teachers, principals, pupils, college coordinators, self-evaluation, and pupil gain.

Intelligence and Success

Research in the area of intelligence as a valid predictor of success in student teaching does not provide us with a clear correlation, but at best, indicates certain trends or relations. Bliss (9) found no significant difference between high and low ratings of 1,305 teachers and intelligence as measured by the Otis Intelligence Test, the Stanford Intelligence Test, and the National Intelligence Test. Broom (13) found that of three factors studied--intelligence, scholarship, and professional knowledge--intelligence as measured by the Thorndike Intelligence Examination correlated highest to success in student teaching. A coefficient correlation of .30 was found for success and intelligence. Jones (43), in a study of 65 student teachers, found a correlation coefficient of .11 between the Henmon Test of Mental Ability and success in student teaching. Knight (47), in a study of 156 elementary and secondary student teachers, found a correlation coefficient of .16 when success was compared to

intelligence. The lack of consistent and definite correlations between intelligence and teaching success suggest that success is not dependent on intelligence alone, but that other variables must exist.

Scholarship and Success

Studies which have attempted to relate teaching success to academic achievement have produced correlation coefficients which have ranged from .02 to .82. Seagoe (79) reported correlation coefficients varying from .02 to .14 between ratings and scores on achievement tests. Almy and Sorenson (1), in a study of 110 student teachers, found a correlation coefficient of .45 between academic work and teaching grades. Bent (8), in a study of 487 students enrolled in the School of Education, University of Minnesota, found a correlation coefficient of .46 between general honor points and ratings by supervising teachers. Lawton (51), in a study of academic attainment as assessed by examinations, compared to the teaching grades of two groups of 45 student teachers, found the following correlations:

Group A 45 Student Teachers r .70

Group B 45 Student Teachers r .82

Mead and Holly (56) used supervising teacher ratings of 39 student teachers as the basis of a study to improve rating scales in teacher

training. A correlation coefficient of .24 was found between student teaching success and scholarship. A higher correlation of .57 was found to exist between grades received in methods courses and success in student teaching. Morriss (62) found a correlation coefficient of .55 in a study of 60 student teachers when their grades in student teaching were related to their college academic average. Bossing (10), in a study of teacher aptitude tests, found a correlation coefficient of .19 for 165 teachers when their academic grades were compared to ratings by supervisors. Holt (40), in a study of 19 student teachers, found the correlation coefficient to be .44 between university grade points and success in student teaching. Broom (13) included 148 student teachers in his research and found scholarship to correlate .21 to success in student teaching. Ryans (77, p. 314), in his very extensive study Characteristics of Teachers, makes the following statement:

The conclusion seems inescapable that there is a highly significant relationship between academic success in college and such characteristics as those in which the study was concerned (if self-reports of academic success are to be trusted).

A review of the literature in the area of predictions of teaching success based upon academic achievement reveals certain limitations and weaknesses in many of the studies. Small sample sizes used to make multivariate analyses, men and women combined in the

same study, a wide range of ages and differentiated teaching assignments and differences in preparation, all contribute to the weaknesses of the designs. One major limitation in many of the studies centers around the criteria used to measure teaching success. The limited range of performance ratings in student teaching does not lend itself to a comprehensive interpretation of "good" versus "bad" teaching.

Personality and Success

Wingo (89, p. 9) states, "There are many different types of personality which can be identified with success in teaching." For many years researchers have attempted to discover what these personality traits are and if any of them do correlate to success in teaching. In older studies the most frequently used personality inventories were the Bernreuter Personality Inventory, the Thurstone Personality Schedule, and the Humm Wadsworth Temperament Survey. In recent years the most frequently used instruments have been the Minnesota Multiphasic Personality Inventory, the Minnesota Teacher Attitude Inventory, the Heston Personal Adjustment Inventory, and the Kuder Preference Record.

Using the Bernreuter Personality Inventory, designed originally to measure the normal personality in terms of dominance-submission, introversion-extroversion, neuroticism, and

self-sufficiency--and with the addition of two other scales developed to measure self-confidence and sociability--the following studies attempted to correlate various subtests and various measures of teaching success.

Seagoe (78, 79) used 31 elementary school student teachers in a study and reported correlation coefficients of $-.38$ and $.06$ between scores on the subtests and ratings of student teaching success. Later in a follow-up study she used ratings of in-service teaching success and found correlation coefficients of $-.30$ and $-.25$ between the same scale and teaching success. Using supervisor's ratings, Ward and Kirk (87) reported correlation coefficients from $-.24$ to $.04$ between various subtests and the ratings on 95 student teachers. Laycock obtained correlation coefficients of $-.21$ to $.33$ between scores on the subtests and grades in student teaching of 80 graduate students. In a study of 157 student teachers and 173 in-service teachers by Phillips (68), scores on the Bernreuter were correlated to supervisors' ratings, and he reported correlation coefficients which ranged from $-.09$ to $.07$. Rostker (73), in a study of 28 teachers, found correlation coefficients ranging from $-.31$ to $.25$ between scores on the subtests and pupil gain in achievement.

Laycock (52) used a different type of analysis of the Bernreuter. By comparing the means of students placed in the top and

bottom quarters on the basis of marks in student teaching he reported critical ratios between mean differences on the subjects. The critical ratios ranged from 4.14 to 19.1. When 152 student teachers were grouped into stable and unstable subgroups on the basis of the Bernreuter, Retan (71) found that 75 per cent of the stable subgroup received good to excellent ratings by superintendents. Only 52 per cent of the unsuitable group received similar ratings of good to excellent. This difference is considered to be statistically significant.

Bells Adjustment Inventory was designed to measure personal adjustment in relation to home, health, social, and emotional situations. Studies by Jones (43), Seagoe (78), and Phillips (68) have reported correlation coefficients ranging from $-.40$ to $-.04$ between scores on the inventory and various criteria of teaching success.

The Thurstone Personality Schedule, designed to measure neurotic tendency, was used in three related studies with conflicting results. Ryans reported a tendency for certain parts of the inventory to differentiate between good and poor groups of elementary teachers. Seagoe (78) and Hertzberg (38) reported correlation coefficients from $-.55$ to $.10$ on various measures of success and scores on the inventory. Symonds (82), in an observation study of 24 teachers, stated that there was no one "best" type of teacher based upon personality. He stated that all types of personality

characteristics were found and that the accepted belief that only normal, well-adjusted persons should be teachers seems not to hold. Symonds observed that some of the successful teachers were definitely neurotic and their neuroticism definitely contributed to their success as teachers.

The Humm-Wadsworth Temperament Schedule was designed to measure various components of temperament: normal, cycloid, depressive, paranoid, and epileptoid. In studies of student teachers Seagoe (78) and Grieder and Newburn (33) also arrived at conflicting results. Seagoe reported coefficients of .63 between scores on the inventory and grades in student teaching. Grieder and Newburn found that no component could be used to differentiate between subgroups formed on the basis of grades in student teaching.

Probably one of the most frequently used inventories in research dealing with teaching success and prediction of success is the Minnesota Teacher Attitude Inventory. Validated on three different groups of teachers, this inventory received an extensive description by Cook, Leeds, and Callis in the Twenty-eighty Yearbook, Association for Student Teaching (22). In a study of 100 teachers, Cook, Leeds, and Callis found that ratings by pupils, principals, and trained observers revealed correlation coefficients of .60 between scores on the inventory and ratings. In this and further

studies Leeds found that trained observer ratings of the teachers revealed the highest correlations, followed by pupil ratings and principal ratings. Fuller (28) analyzed the scores of 74 women student teachers in elementary education and reported that coefficient correlations to self-ratings, supervisor ratings, and a composite rating of interest in teaching, class participation in discussion, attitude, and attendance at meetings were not significant enough to discriminate between students receiving the highest ratings and those receiving the lowest ratings in the group studied. However, Fuller used student teachers in grades from kindergarten to six and with an age range from twenty to forty-one. Kelley (44), in a study of 41 students enrolled in a community experience course, reported significant differences in personality between students preparing to teach in early elementary as compared to later elementary grades. Michaelis (59, p. 425), in a discussion of the limitations of studies done in prediction of student teaching success on the basis of personality, states: "In certain studies no attention was given to possible differences that might have existed between teachers interested primarily in working with young children and those interested in teaching adolescents." Tyler (86) also suggests that further analysis is necessary to determine if there are differences among the personality patterns of teachers of varying efficiency in elementary and

secondary schools. Ryans (77, pp. 385-86), in a summary of his work, makes the following statements:

1. The attitudes of elementary teachers toward administrators, and also toward fellow teachers and nonadministrative personnel in the schools were markedly more favorable than secondary teachers.
2. The viewpoints expressed by secondary teachers were of a more traditional or learning centered nature, while those of elementary teachers leaned more in the direction of permissiveness.
3. There was a tendency for elementary teachers who were judged to be warm and understanding in classroom behavior and also those judged to be stimulating in their classes to manifest superior emotional adjustment.
4. Women teachers in grades five and six were assessed somewhat higher on several classroom behavior characteristics than teachers in other elementary grades.

The Minnesota Multiphasic Personality Inventory (M.M.P.I.) has been used in a variety of studies in an attempt to discriminate good from poor teachers and as a predictor of success. The M.M.P.I. has also been used extensively in clinical studies to assess various aspects of personal adjustment. In a study by Stough (80) two subtests, "Depression" and "Schizophrenia" revealed a statistically significant mean difference between good and poor teachers. Michaelis (59) and Tyler (86), on the other hand, reported that no difference between means was statistically different or significant at the .01 level in a study of good and poor teachers selected from a group of 47 elementary student teachers. Pemberton (67) stated that five of the subtests differentiated between student teachers with high ratings

and those with low ratings at the .05 level. Michaelis (59) selected five of eighteen scales from the M.M.P.I. for further analysis after the battery had been administered to 146 student teachers. When correlated to student teaching success as measured by two separate ratings by supervising teachers and supervisors, only IF (intellectual functioning), Pt (psychasthenia), and Sc (schizophrenia) were found to have slight differentiating power between high and low student teachers.

Kelley (44), Loy (54), and Robb (72) used the Kuder Preference Record in student teaching studies. The findings may be summarized in the following statements.

1. They found no significant differences in such traits as related to sex and/or grade level objectives.
2. Female students appear to have more favorable attitudes toward groups, to be more socially oriented, and to be more amenable to personality differences.
3. Elementary majors appear to be more democratic and permissive and to be better adjusted.
4. In general, there appears to be little correlation between academic achievement and success in student teaching.
5. The Kuder Preference Record scores cannot be used to predict success in student teaching.

The Heston Personal Adjustment Inventory is a relatively new instrument with six subtests designed to measure aspects of adjustment.

In a study of 54 elementary school student teachers, Michaelis and Tyler (60) found that three of the subtests--"Confidence," "Sociability," and "Personal Relations"--differentiated at better than the .10 level between groups of good and poor student teachers. In a later study Tyler found that male secondary school student teachers with high ratings also made higher scores on sociability, personal relations, and home satisfaction than did students with lower ratings. Michaelis (60) found in a study of 146 student teachers that home satisfaction was the only subject that appeared to have sufficient differential power to warrant further study. Students with high student teaching ratings tended to have higher scores on this particular subtest than did those students with low and average ratings. A correlation coefficient between scores on the H factor and the ratings of student teaching success was .14, which was not significant at the .01 level.

Information dealing with the Guilford Zimmerman Temperament Survey, the Cattell 16 Personality Factor Questionnaire, and the Norman Peer Group Nomination Form will be found in the Appendixes.

Ryans (78, pp. 366-67) makes the following generalizations regarding a group of twenty outstanding elementary teachers.

A growing body of evidence is accumulating that indicates certain characteristics which may contribute to the model of the teacher. Certain generalizations are suggested, based not only

on the results of investigations conducted by the Teacher Characteristics Study, but also on data growing out of various other researches, employing quite different approaches and criteria.

Superior intellectual abilities, above-average school achievement, good emotional adjustment, attitudes favorable to pupils, enjoyment of pupil relationships, generosity in the appraisal of the behavior and motives of other persons, strong interests in reading and literary matters, interest in music and painting, participation in social and community affairs, early experiences in caring for children and teaching (such as reading to children and taking a class for a teacher). . . .

While extreme caution should be taken in guarding against an overgeneralized picture of the good or effective teacher, or the opposite exemplified by the inferior, or ineffective teacher, the results of a variety of investigations do point to certain recurring descriptions which may have some validity insofar as contemporary culture in the United States is concerned. Certainly the evidence suggests leads and clues which provide starting points for thinking about teaching competencies and for more intensive investigations and which may open the way for more adequate conceptualizing about teacher performance.

CHAPTER III

PRESENTATION OF THE RESULTS

The procedures used in gathering data and the statistical method selected to study the problem were presented in Chapter I. In this chapter the results will be presented by first examining the hypotheses in light of the derived information.

Analysis of the Assessment Reports

Agreement among the Evaluators

Upon the completion of the rating forms an interscore reliability was computed. An inspection of Table 1 reveals a statistically significant agreement between three of the four adult evaluations.

The highest correlation was between the principal and the college supervisor, and the next highest rating was between the supervising teacher and the college supervisor. Except for the student teacher self-evaluation, which did not correlate with any measure of significance, the adult evaluations correlated significantly at above the .01 level. Later in the chapter the investigator will discuss the

TABLE 1
CORRELATIONS BETWEEN EVALUATORS ON MEASURES
OF STUDENT TEACHING SUCCESS^a

Evaluator	Evaluator			
	1	2	3	4
1. Supervising teacher				
2. Self	-.074			
3. Principal	.519	.013		
4. College supervisor	.535	.011	.542	

^aLevels of significance: .05 level = .261; .01 level = .338.

student teacher self-evaluation as it related to other aspects of the study.

The pupil evaluations of the student teachers correlated significantly with the supervising teacher evaluations, but not with the other adult ratings. The correlations between the three items on the pupil rating and the supervising teacher ratings may be seen in Table 2.

Pupil Ratings

Significant regression coefficients

Significant regression coefficients were found for two of the items on the pupil evaluation form. Table 3 presents the data.

Item number 1.--"I like her" went through two steps of regression to develop correlation coefficients at the .01 level of significance with the Cattell M factor and with "other experiences with children." The student teachers who scored high on the pupil ratings scored low on the Cattell M factor. A low score on this bipolar factor indicated that student teachers who were steady, sound, dependable, conventional, and alert to practical needs received the higher success ratings from the pupils. A complete description of this source trait will be found in the Appendixes.

TABLE 2
COEFFICIENTS OF CORRELATION BETWEEN SUPERVISING
TEACHER AND PUPIL RATINGS OF STUDENT
TEACHING SUCCESS

Rating	Rating			
	1	2	3	4
1. Pupil rating: "I liked her."				
2. Pupil rating: "She helped me learn."	.862			
3. Pupil rating: "I would like her as my teacher next year."	.933	.882		
4. Supervising teacher rating . . .	.314	.331	.341	

^aLevels of significance: .05 level = .261; .01 level = .338.

TABLE 3
SIGNIFICANT REGRESSION COEFFICIENTS
OF FOUR INDEPENDENT VARIABLES
IN TWO REGRESSION EQUATIONS^a

Item No.	Variable No.	Step No.	Factor	Partial Correlation Coef.	Multiple Correlation Coef.
1	37	1	Cattell M.	-.284	
	27	2	Other experiences	-.259	-.383
2	27	1	Other experiences	-.336	
	24	2	Community exp.	.285	.420

^aLevels of significance: .05 level = .261; .01 level = .338.

For experiences not covered by the check list "Experiences with Children Prior to Student Teaching," a section of the questionnaire was made available for students to write in other experiences they had participated in prior to student teaching. A close inspection of the responses revealed that sixteen of the fifty-seven students in the study had used this opportunity. The majority of the students described work done in hospitals and contacts with physically handicapped children.

This variable, "other experiences with children," correlated negatively with success ratings in student teaching as evaluated by the pupils. A negative correlation indicates that students who reported experiences with hospital-bound or physically handicapped children received lower success ratings than students who had not participated in these types of experiences. It may be that the nature of the contacts and the professional orientation of the future teachers both contributed to this low success rating in a regular public school classroom. The contacts that were described indicated a work experience with small numbers of children in a setting that was quite different from a regular classroom. The relationship could be described as tutorial.

Item number 2.--The second item on the pupil evaluation "she helped me learn" also went through two steps of regression to develop correlations significant at the .01 level. The significant correlations are reported in Table 3.

"Other experiences with children" again related in a negative direction with the pupil evaluation. The partial correlation coefficient was significant at the .01 level.

The second step of the regression equation includes the variable "community experiences with children," which was significant at the .05 level. The multiple correlation coefficient thus achieved is .420, which is significant at above the .01 level for the population studied.

Student teachers were asked to report the community experiences they had with children prior to student teaching. These experiences ranged from high school contacts to college credit work. The information thus gathered was identified as two separate variables for the regression program. Variable 23 included only experiences with children while in college, and variable 24 included only work done while in high school. An inspection of Table 3 reveals that variable 24 was statistically significant (.05) and was identified with successful student teachers. The majority of these experiences

were reported as the care of neighboring children, commonly called "baby-sitting."

It may be that individuals who were considered to be mature and responsible enough to take care of children while in high school carried this capacity for working with children into their student teaching experience.

Significant partial correlation coefficients

Significant partial correlation coefficients were found for two other variables in the study. Church-associated work with children while in college correlated negatively, $-.275$, significant at the .05 level, to item number 1 of the pupil rating. This negative correlation to church-related work is also found in all other ratings on this particular variable. A possible explanation for this relationship might be that individuals who sought this type of contact were seeking assurance that they were capable of working with children. Another possibility may be that the experiences in a religiously oriented program were too unique to be of much help in a public school environment.

A significant correlation at the .05 level was found between item number 1 and the Cattell I factor. A negative correlation, $-.280$, on this bipolar factor would describe the successful student

teacher as being realistic, practical, and self-reliant. This relationship seems to be in agreement with the significant correlation found with the Cattell M factor describing the successful student teacher as being sound, dependable, and alert to practical needs.

No significant correlations were found between pupil ratings and the American Council on Education Psychological Examination or with the University of Michigan grade point.

Supervising Teacher Ratings

Significant regression coefficients

Four steps of regression were utilized by the program to develop a multiple correlation coefficient of .566, which is significant at above the .01 level. The four variables selected from the supervising teacher ratings are reported in Table 4.

Supervising teachers rated as successful those students who scored in the lower range of the Cattell B factor, "general intelligence." This correlation, significant at the .05 level, indicates that in the population studied, the least intelligent received the highest success rating. However, a comparison of the group scores to the national norms as found in the Cattell 16 Personality Factor Questionnaire (18) revealed the students to be above the norm for "American college women." The results of the supervising teacher

TABLE 4
SIGNIFICANT REGRESSION COEFFICIENTS BETWEEN
SUPERVISING TEACHER EVALUATIONS AND
FOUR INDEPENDENT VARIABLES^a

Variable No.	Step No.	Factor	Partial Corre- lation Coef.	Multiple Corre- lation Coef.
29	1	Cattell B	-.316	
15	2	Grade point	.183	.278
36	3	Cattell L	.279	.424
22	4	Church work with children	.279	.566

^aLevels of significance: .05 level = .261; .01 level = .338.

evaluation may indicate that in this group of bright student teachers those who were not the brightest received the better ratings.

The second step in the regression equation includes a positive though not significant correlation to the University of Michigan grade point. When this variable is added, a positive correlation, significant at the .05 level, is found for the combination of steps one and two.

Included as the third step of the equation is the Cattell L factor. This factor is defined as a bipolar source trait with high scores reflecting protension (suspecting, jealous) and low scores reflecting relaxed security (accepting, adaptable). The successful student teacher had a high score on the Cattell L factor. When this correlation, significant at the .05 level, was included in the equation, a multiple correlation coefficient of .424 was developed, which is significant at the .01 level. Could it be that the nature of the student teaching role requires that a student be constantly on guard against revealing too much about herself or being too outgoing and accepting in her relationship with the supervising teacher?

The fourth step in the equation included the variable "church work with children." When this negative correlation, $-.236$, was combined with the previously mentioned variables in the equation, a multiple correlation coefficient of .566 was developed, which is

significant at above the .01 level. The inclusion of the negative correlation from the variable "church work with children" concurs with the results found in the pupil evaluation of the student teacher.

Partial correlation coefficients

One partial correlation coefficient was found in the supervising teacher ratings. The Cattell Q_2 factor correlated at the .05 level to success ratings. Supervising teachers rated as successful those student teachers who were socially group-oriented, dependent, conventional, and fashionable.

No significant correlations were found between supervising teacher evaluations and University of Michigan grade point scores or the A.C.E. examination.

College Supervisor Ratings

Significant regression coefficients

Three steps of regression were utilized by the program to develop a multiple correlation coefficient of .520, which is significant at above the .01 level. The three factors selected from the college supervisor ratings are reported in Table 5.

College supervisor ratings correlated significantly with three personality factors. The successful student teacher was perceived

TABLE 5

SIGNIFICANT REGRESSION COEFFICIENTS BETWEEN
COLLEGE SUPERVISOR EVALUATIONS AND
THREE INDEPENDENT VARIABLES^a

Variable No.	Step No.	Factor	Partial Corre- lation Coef.	Multiple Corre- lation Coef.
10	1	Norman surgency	.373	
41	2	Cattell Q ₂	-.336	.450
28	3	Cattell A	.059	.520

^aLevels of significance: .05 level = .261; .01 level = .338.

to be frank, energetic, and talkative, as reflected by scores on the "surgency factor" of the Norman Peer Group Nomination Form.

This factor, significant at the .01 level, is the first step in the regression equation. Low scores on the Cattell Q_2 factor, a bipolar source trait, corresponded to high success ratings and correlated significantly at the .05 level. Students who had low scores on the Q_2 factor are defined as group-dependent, conventional, and fashionable. When these two factors are combined, a multiple correlation coefficient of .450 is developed, which is significant at the .01 level. The third step in the equation includes the Cattell A factor "warm, sociable, frank, open, and talkative," and a multiple correlation coefficient of .520, significant at above the .01 level, is attained.

Partial correlation coefficients

One significant partial correlation, not included in the regression equation, was found in an examination of the college supervisor ratings. "Emotional stability," a factor in the Norman Peer Group Nomination Form, correlated significantly at the .05 level. College supervisor ratings favored the student teacher who was calm, poised, and in control of her emotions.

No significant correlations were found for "experiences with children" prior to student teaching, University of Michigan grade

point, or scores on the American Council on Education Psychological Examination.

Supervising Principal Ratings

No statistically significant correlations were found for supervising principal ratings of student teaching success. Most of the correlations were in agreement with the supervising teacher and college supervisor correlations, but none of them achieved the level necessary to be considered significant. The investigator suggests that the limited personal contact between the supervising principal and the student teacher is responsible for these results.

Student Teacher Self-evaluation

Earlier in this chapter the investigator postponed a discussion of the results of the self-evaluation. An inspection of the five rating forms revealed that the self-evaluation did not correlate significantly with any of the other ratings. A further inspection of the data disclosed the following:

1. Student teacher self-evaluation scores correlated significantly at the .05 level with the "objectivity" and "emotional stability" factors of the Guilford Zimmerman Temperament Survey.

2. None of the self-evaluation correlations were included in the multiple regression equations.

3. There was a general lack of agreement between the self-evaluation ratings and results in all phases of the study.

In the two significant correlations noted above, the student teachers who gave themselves high ratings on a self-evaluation scored in the high range of the Guilford Zimmerman on the "objectivity" and "emotional stability" factors. The general lack of agreement between the self-evaluation and other raters raises some interesting questions. Is it possible that student teachers cannot or will not evaluate themselves within the same standards as other evaluators? Is the highly objective, emotionally stable person more capable of giving himself socially acceptable ratings? Is success in student teaching so personal a measure of achievement that it cannot be self-evaluated realistically?

The results of the student teaching self-evaluation raised more questions than answers and indicated to the investigator the need for more study of self-evaluation.

Summary

The regression analysis program developed multiple regression coefficients at above the .01 level of significance for three of

the five rating forms. Neither the self-evaluation or the supervising principal evaluation developed correlations significant enough to be used by the program.

An inspection of the interscorer reliability, the partial correlation coefficients, and the multiple correlation coefficients identified variables which were significant enough to help in identifying success in student teaching. The results of the statistical analysis will now be used to examine the stated hypotheses.

Examination of the Hypotheses

In Chapter I six hypotheses were expressed. These were based upon personality, intelligence, academic achievement, and experiences with children prior to student teaching. The predictions and the findings will now be presented with an explanation of the findings. The results of these analyses are summarized in Tables 6 and 7.

Personality Factors

Hypothesis 1. Student teachers who receive the highest ratings in student teaching will also score highest on the following factors of the Guilford Zimmerman Temperament Survey:

Ascendency	(A)
Emotional stability	(E)

Sociability	(S)
Personal relations	(P)

“Ascendency.” There is a positive but not statistically significant relationship between success ratings in student teaching and ascendency as expressed by the student self-evaluation and the college supervisor evaluation. Ratings done by the pupils, supervising principal, and supervising teacher are negative and not statistically significant.

“Emotional stability.” A statistically significant correlation (.05) exists between emotional stability and the student teacher self-evaluation. The pupil ratings and the supervising teacher ratings also show a positive association, but not at the level necessary to be significant. The principal and college supervisor ratings show a negative correlation, but neither is statistically significant.

“Sociability.” Though none of the correlations are statistically significant, there is a positive direction of association between success ratings and sociability as evaluated by all except the supervising principal.

“Personal relations.” The supervising teacher, college supervisor, and principal ratings indicate a positive but not statistically significant relationship between success and personal relations. On the three items of the pupil ratings two are negative and one is

positive when correlated with personal relations, but none are statistically significant.

On the basis of the above findings, experimental hypothesis 1 must be rejected.

Hypothesis 2. Students who receive the highest success ratings in student teaching will also score highest on the following factors of the Cattell 16 Personality Factor Questionnaire:

Intelligent	(B)
Conscientious	(G)
Sensitive	(I)
Will power	(Q ₃)

“Intelligent.” A negative correlation exists between intelligence or brightness as measured by this factor and success ratings by all of the evaluations in the study. The supervising teacher ratings correlated negatively, $-.316$, which is significant at the .05 level. The student teachers with the higher success ratings were not the ones who scored in the high range of the Cattell B factor.

“Conscientious.” Except for the student teacher self-evaluation, there was a positive but not statistically significant correlation between success in student teaching and a high score on the conscientious factor. The self-evaluation revealed a low negative correlation to success and again revealed a lack of agreement between the student teachers and other raters.

"Sensitive." Pupil rating item number 1 correlated negatively at the .05 level to the sensitivity factor of the Cattell 16 P.F. Student teachers who were practical, realistic, and self-reliant, as measured by this factor, received the high success ratings from the pupils. The other raters indicated a preference for the sensitive, artistic, and imaginative student teacher, but the correlations were not statistically significant.

"Will power." None of the ratings correlated significantly with the Cattell Q_3 factor, nor was any direction observable from the correlations attained.

Predictions of success based upon the four factors "intelligent," "conscientious," "sensitive," and "will power" did reveal some statistically significant correlations. However, on two factors--"intelligence" and "sensitivity"--they were opposite to the expected direction of association. The original assumption was that all four of these culturally acceptable traits would correlate significantly with success in student teaching. Because the raters were not in agreement, and all of the correlations did not achieve the expected significance, experimental hypothesis 2 must be rejected.

Hypothesis 3. Students who receive the highest success ratings in student teaching will also score highest on the following factors of the Norman Peer Group Nomination Form:

Culture
Dependability
Emotional stability

“Culture.” Predictions of success in student teaching based upon the culture index were found to be positive but not statistically significant for any of the ratings.

“Dependability.” Results of all of the ratings were found to be lacking in significance, although the pupil evaluations show a strong positive association between responsibility and success in student teaching.

“Emotional stability.” The college supervisor ratings were statistically significant (.05) between success and emotional stability. None of the other ratings are significant.

Predictions of success in student teaching based upon the “culture,” “dependability,” and “emotional stability” factors of the Norman Peer Group Nomination Form show a number of positive correlations between success ratings, but the limited level of significance does not warrant the acceptance of hypothesis 3.

Psychological Examination

Hypothesis 4. Students who receive the highest success ratings in student teaching will also have the highest scores on the American Council on Education Psychological Examination.

No significant correlations were found for this variable. An inspection of Table 7 reveals a consistent negative correlation which would indicate a tendency for students with lower A.C.E. scores to rate slightly higher in student teaching. This finding agrees with the relationship of success and lower scores on the Cattell 16 P.F. "general intelligence." On the basis of this evidence, experimental hypothesis 4 must be rejected.

Academic Ability

Hypothesis 5. Students who receive the highest success ratings in student teaching will also have the highest University of Michigan grade point scores.

Four of the five success ratings revealed a positive correlation to the University of Michigan grade point scores. The self-evaluation revealed a negative but not statistically significant correlation between grade point scores and success in student teaching. Though there is a positive association between grade point and success for most of the evaluators, experimental hypothesis 5 must be rejected for lack of significant correlations.

Experiences with Children

Hypothesis 6. Students who receive the highest success ratings in student teaching will also have the greatest number of contact hours with children prior to student teaching.

TABLE 6

SUMMARY OF THE COEFFICIENTS OF CORRELATION BETWEEN
PERSONALITY FACTORS AND SCORES ON FIVE
ASSESSMENT FORMS^a

Personality Factor	Pupil Evaluations ^b			Super- vising Tchr.	Self	Prin- cipal	Coll. Super- visor
	1	2	3				
Guilford							
Zimmerman:							
A	-.124	-.136	-.042	-.063	.203	-.061	.150
E	.082	.118	.123	.084	.268	-.086	-.109
S	.042	.055	.098	.019	.142	-.127	.157
P	-.005	.032	-.032	.020	.205	.213	.029
Cattell							
16 P.F.:							
B	-.129	-.204	-.117	-.316	-.005	-.051	-.181
G	.187	.257	.157	.145	-.078	.033	.018
I	-.280	-.152	-.135	.079	.210	.129	.164
Q ₃	.005	.010	.063	.003	-.022	-.064	-.051
Norman peer nomination:							
Culture	.060	.011	.034	.059	.111	.161	.232
Dependa- bility	.241	.172	.186	.078	-.125	.194	-.128
Emotional stability . .	-.093	-.106	-.089	-.017	.036	.153	.312

^aLevels of significance: .05 level = .261; .01 level = .338;
N = 57.

^bPupil evaluations: (1) "I like her." (2) "She helped me learn." (3) "I would like her as my teacher next year."

An inspection of Table 7 reveals that students who reported a large number of contact hours with children while in high school showed a significant correlation (.05) to student teaching success as rated by the pupils on the factor "she helped me learn." Community experiences with children while in college also correlated with success ratings, but not at a statistically significant level. All other correlations tend to show a negative association, and in the case of "college work with children" and "other experiences with children" this is significant at above the .05 level.

Both of the negative correlations are related to a structured contact with children. "Other experiences with children" was found to be limited to hospital work with children and working with physically handicapped youngsters. It would seem that individuals who indicated an interest in working with children in a specialized field were not perceived to be very successful in a public school classroom. In the case of church-associated work while in college, the investigator surmises that this kind of teaching experience may have little in common with public school work either in orientation, task assignment, or role identification. Three significant correlations were found, but experimental hypothesis 6 must be rejected. It appears that the number of contact hours reported with children prior to student teaching is not as significant as the type of contacts.

TABLE 7

SUMMARY OF THE COEFFICIENT OF CORRELATION BETWEEN
AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL
EXAMINATION SCORES, MICHIGAN GRADE POINT,
EXPERIENCES WITH CHILDREN PRIOR TO
STUDENT TEACHING, AND SCORES
ON FIVE ASSESSMENT FORMS^a

Item	Pupil Evaluations ^b			Super- vising Tchr.	Self	Prin- cipal	Coll. Super- visor
	1	2	3				
A.C.E. scores . .	-.166	-.083	-.115	-.144	.074	.149	-.177
Michigan grade point	.137	.198	.133	.183	-.103	.249	.099
Experiences with children:							
Scouting							
H.S.	.020	.041	.022	-.014	-.165	-.012	-.107
College . . .	.037	.023	.030	-.070	-.197	.018	-.136
Church							
H.S.	-.175	-.115	-.065	-.019	-.054	-.028	.087
College . . .	-.275	-.221	-.225	-.236	-.143	-.087	-.065
Community							
H.S.	.140	.285	.194	.078	-.035	.168	-.026
College . . .	.080	.099	.140	.065	-.247	.117	.178
F.T.A.	-.113	-.132	-.107	-.011	-.112	.093	.124
Coll. credit . .	-.095	-.210	-.091	-.134	.171	-.223	-.015
Other	-.259	-.336	-.208	-.133	.029	-.018	.004

^aLevels of significance: .05 level = .261; .01 level = .338;
N = 57.

^bPupil evaluations: (1) "I like her." (2) "She helped me learn." (3) "I would like her as my teacher next year."

Though each hypothesis was rejected, some significant findings were established, and these were discussed in the analysis of the assessment reports.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Brief Restatement of the Problem and Procedures

This study was an attempt to predict student teaching success in grades four, five, and six. Information about student teachers in terms of personality, academic ability, and experiences with children prior to student teaching was used as possible predictors of student teaching success. Success was measured through the use of ratings from the supervising teachers, supervising principals, college supervisors, pupil evaluations, and a self-evaluation.

Subjects used in this study were all female seniors under the age of twenty-four and enrolled in the School of Education, University of Michigan. The fifty-seven students were assigned to twenty-three schools within four school districts. As an on-campus assignment they were required to meet for one hour a week in a seminar which was directed by a member of the School of Education, University of Michigan. Data concerning these students were collected during the second semester, 1960-61.

Three personality inventories were used in the study. The Cattell 16 Personality Factor Questionnaire, Form A, and the Norman Peer Group Nomination Form were administered by the investigator, and scores on the Gulford Zimmerman Temperament Survey were available from the Recorder's Office. The American Council on Education Psychological Examination scores were tabulated from information available in the Bureau of Psychological Services, University of Michigan. The students' grade point average was obtained up to and including the semester prior to student teaching. Experiences with children prior to student teaching were recorded through the use of a check list.

Measures of student teaching success were achieved through the use of five evaluation forms. These forms were completed by the supervising teacher, supervising principal, college supervisor, pupils, and a self-evaluation by the student teacher.

The information thus gathered was analyzed through the use of the Regression Analysis Program for the IBM 704 computer.

Prior to the collection of data, six hypotheses were developed. The results of a study by Isaacson, McKeachie, and Milholland (41) served as a guide in establishing specific personality factors to be used in hypotheses 1, 2, and 3.

Hypothesis 1. Student teachers who receive the highest success ratings will also score highest on the following factors of the Guilford Zimmerman Temperament Survey:

Ascendency
Emotional stability
Sociability
Personal relations

Hypothesis 2. Student teachers who receive the highest success ratings will also score highest on the following factors of the Cattell 16 Personality Factor Questionnaire:

Intelligence
Conscientiousness
Sensitivity
Will power

Hypothesis 3. Student teachers who receive the highest success ratings will also score highest on the following factors of the Norman Peer Group Nomination Form:

Culture index
Dependability
Emotional stability

Hypothesis 4. Student teachers who receive the highest success ratings will also have the highest scores on the American Council on Education Psychological Examination.

Hypothesis 5. Student teachers who receive the highest success ratings will also have the highest University of Michigan grade point scores.

Hypothesis 6. Student teachers who receive the highest success ratings will also have had the greatest number of contact hours with children prior to student teaching.

Conclusions and Suggestions for Further Study

The Regression Analysis Program was able to supply the investigator with two types of statistical information, partial correlation coefficients and multiple regression coefficients. Each hypothesis was examined in light of the assessment reports with careful attention to interscorer agreement.

Table 8 serves to present the analyses of hypotheses 1, 2, and 3, which dealt with the relation of specific personality factors to success ratings in student teaching.

An inspection of this table reveals that only the student teacher self-evaluation correlated significantly with one measure of personality in hypothesis 1. On the basis of this limited relationship between the self-evaluation and "emotional stability," it was necessary to reject hypothesis 1.

The Cattell B factor, "general intelligence," correlated negatively with the supervising teacher evaluation. The Cattell I factor, "sensitive," correlated negatively with the pupil ratings. On the basis of this limited relationship it was necessary to reject hypothesis 2.

Hypothesis 3 was also rejected on the basis of the limited relationship revealed by the development of only one significant

TABLE 8

**CORRELATIONS BETWEEN SPECIFIC PERSONALITY FACTORS
AND SCORES ON FIVE ASSESSMENT FORMS DERIVED
FROM HYPOTHESES 1, 2, AND 3^a**

Personality Factor	Pupil Evaluations ^b			Super- vising Tchr.	Self	Prin- cipal	Coll. Super- visor
	1	2	3				
Guilford Zimmerman:							
A	-.124	-.136	-.042	-.063	.203	-.061	.150
E	.082	.118	.123	.084	.268	-.086	-.109
S	.042	.055	.098	.019	.142	-.127	.157
P	-.005	.032	-.032	.020	.205	.213	.029
Cattell 16 P.F.:							
B	-.129	-.204	-.117	-.316	-.005	-.051	-.181
G	.187	.257	.157	.145	-.078	.033	.018
I	-.280	-.152	-.135	.079	.210	.129	.164
Q ₃	.005	.010	.065	.003	-.022	-.064	-.051
Norman peer nomination:							
Culture	.060	.011	.034	.059	.111	.161	.232
Dependa- bility	.241	.172	.186	.078	-.125	.194	-.128
Emotional stability . .	-.093	-.106	-.089	-.017	.036	.153	.312

^aLevels of significance: .05 level = .261; .01 level = .338;
N = 57.

^bPupil evaluations: (1) "I like her." (2) "She helped me learn." (3) "I would like her as my teacher next year."

correlation. The college supervisor ratings and "emotional stability" correlated at the .05 level of significance.

Table 9 serves to present the results of the analyses of hypotheses 4, 5, and 6. None of the ratings correlated significantly with scores on the American Council on Education Psychological Examination or with the University of Michigan grade point. Therefore, hypotheses 4 and 5 were rejected.

Table 9 also reveals some significant correlations between success in student teaching and community experiences while in high school. It also reveals a negative relationship of student teaching success to church work with children while in college, and a negative relationship with "other experiences with children." For a lack of more significant correlations, it was necessary to reject hypothesis 6.

Although it was necessary to reject the six experimental hypotheses, the results of the study did bring forth some interesting and statistically significant associations between some of the variables and student teaching success. When an attempt was made to select from all of the variables, those which indicated the highest association to success in student teaching on the basis of the five rating scales, the following pattern emerged:

TABLE 9
CORRELATIONS DERIVED FROM ANALYSES
OF HYPOTHESES 4, 5, AND 6^a

Item	Pupil Evaluations ^b			Super- vising Tchr.	Self	Prin- cipal	Coll. Super- visor
	1	2	3				
A.C.E. scores . .	-.166	-.083	-.115	-.144	.074	.149	-.177
Michigan grade point	.137	.198	.133	.183	-.103	.249	.099
Experiences with children:							
Scouting							
H.S.	.020	.041	.022	-.014	-.165	-.012	-.107
College . . .	.037	.023	.030	-.070	-.197	.018	-.136
Church							
H.S.	-.175	-.115	-.065	-.109	-.054	-.028	.087
College . . .	-.275	-.221	-.225	-.236	-.143	-.087	-.065
Community							
H.S.	.140	.285	.194	.078	-.035	.168	-.026
College . . .	.080	.099	.140	.065	-.247	.117	.178
F.T.A.	-.133	-.132	-.107	-.011	-.112	.093	.124
Coll. credit . .	-.095	-.210	-.091	-.134	.171	-.223	-.015
Other	-.259	-.336	-.208	-.133	.029	-.018	.004

^aLevels of significance: .05 level = .261; .01 level = .338;
N = 57.

^bPupil evaluations: (1) "I like her." (2) "She helped me learn." (3) "I would like her as my teacher next year."

1. The pupils rated highest those student teachers who were sound, practical, and realistic (Cattell I), dependable, conventional, and alert to practical needs (Cattell M). The high-rated student teacher also had extensive contacts with children in a baby-sitting capacity while a high school student. Pupils did not give high success ratings to student teachers who had reported previous contacts with hospital-bound or physically handicapped children. Church work with children prior to student teaching also correlated negatively with success ratings given by the children.

2. Supervising teachers rated highest those student teachers who were socially group-oriented (Norman extroversion) and dependent (Cattell Q_2). There was also a statistically significant relationship between success and lower scores on the Cattell B factor, "general intelligence." Students with high scores on the Cattell L factor "protenstion," the opposite of "relaxed security," also received high success ratings, and students with low contact hours reported in church-associated work with children were perceived to be the better student teachers.

3. The college supervisor rated highest those individuals who were warm and sociable (Cattell A), group dependent (Cattell Q_2), and calm, poised, and composed (Norman emotional stability).

The students who were also talkative, frank, and sociable (Norman extroversion) received the high success ratings.

4. Supervising principals indicated a moderate tendency to evaluate highest those student teachers who had an above average grade point and with a creative, imaginative, and generally cheerful type of personality (Cattell M).

5. Self-evaluations correlated significantly with high scores on "emotional stability" and "objectivity" (Gullford Zimmerman). However, self-evaluations did not correlate significantly with any of the other ratings nor with any other variable.

Summing up the total investigation, it is felt that some of the findings were able to shed a little more light on the very complex problem of predicting and measuring success in student teaching. Though the six hypotheses were rejected as unsuitable in predicting success in student teaching, the number of significant correlations did seem to establish some direction of relationship between success ratings and certain variables within the total study.

The use of the multiple regression technique which summed up all of the evidence of a large number of observations into single discrete evaluations indicates possibilities for further refinements in a study of this problem. There are many possibilities available when the investigator is not limited by the number of variables

he can use. To the present design of this study could be added measures of motivation, creativity, philosophy, affiliation need, empathy, and abilities in the areas of lesson-planning, use of instructional aids, and evaluation. These are but a few of the possibilities available to the investigator seeking greater insight into the problem of establishing predictors of success in student teaching.

Implications for Further Study

Some of the results of this study raised more questions in the mind of the investigator, and each new question opened new avenues for further study.

1. Pupil ratings of the student teacher indicated a preference for the sound, realistic, practical, and concerned with facts individual, over the creative, imaginative, artistic, or unconventional student teacher. If in truth we are trying to train teachers to be stimulating, creative, and challenging classroom practitioners, we perhaps should know more about the relationship of teacher personality to pupil expectations as it affects the teacher-learner role.

2. A correlation at the .05 level between the supervising teacher ratings and high scores on the Cattell 16 P.F., factor L, raises some possibilities for further investigation. On this bipolar factor, the significant correlations favor the student teacher who

revealed a tendency toward the paranoid, suspecting, and jealous. This factor is also included in the regression analysis of the supervising teacher evaluation and becomes part of the multiple correlation coefficient (.566), which is significant at the .01 level. An investigation which includes information about the supervising teacher personality as it relates to the ratings they assign to student teachers might help to explain this seemingly unusual requisite to success.

3. The significant correlation, negative in direction, between contact hours with children in a special environment such as hospital work and work with the physically handicapped indicates a need for more information about the kinds of individuals who have had this preparation. Is their lack of rated success in a public school classroom attributable to this previous contact, personality traits, interest orientation, or some other identifiable characteristic?

4. It would be interesting to find out why students who reported pre-student-teaching experiences in church-associated work with children received ratings which correlated negatively at the .01 level, between this type of contact and success in student teaching.

5. The lack of significant correlations between the student teacher self-evaluation and the other raters deserves further study.

It is possible that student teachers are evaluating a very different dimension of teaching. On the other hand, if students are not able to evaluate their own success or failure in student teaching, a meaningful communication link may well be impaired. A study which would develop various techniques of self-evaluation, plus systematic and continuous evaluations, might help to answer this puzzle.

6. All of the evaluations related high success ratings to lower scores on the Cattell B factor, "brightness, general intelligence." Though the term "lower scores" is relative due to the group norm on this factor being above the national norm, a further study might attempt to establish the reasons for the consistent lack of association between high general intelligence and success in student teaching.

7. Students quite often consider student teaching as a role-playing situation where they are teachers to the children and student to the supervising staff of the school and college. A study of role identification between students with high success ratings and students with low success ratings might reveal the need for greater clarity of both role and expectations.

8. Of the many variables included in this study, personality factors accounted for the majority of the significant correlations. A further study might attempt to match student teachers with supervising

teachers on the basis of personality profiles, attitudes, interest, et cetera, in much the same way as scientific counseling proposes to match men and women by computer programming. Would similar profiles account for success ratings, or how different from their supervisors can students be and still be successful?

APPENDIXES

APPENDIX A

DESCRIPTION OF THE CATTELL 16 PERSONALITY FACTOR QUESTIONNAIRE

DESCRIPTION OF THE CATTELL 16 PERSONALITY FACTOR QUESTIONNAIRE

This questionnaire was designed to give a total picture of personality dimensions in a questionnaire form, rather than an objective battery for each personality trait. To escape distortion in response patterns the questions are phrased in such a way as to minimize the perceived relationship between question and trait in question. The question responses are treated as behavior and not as self ratings. The test may be administered in both group and individual situations, thereby facilitating data-gathering.

Profiles of individual occupations have been used as a basis of comparison in studies of personality and occupational success. Studies reported show unique patterns for psychiatric technicians, state policemen, salesmen, administrators, college students, researchers, and teachers. Hadley (35) compared highly rated with borderline failing student teachers and found greater teaching success associated with stronger "super ego" (D), "desurgency" (F), "naivete" (N), "higher self-sentiment development" (Q3), and "lower ego strength" (C-). No significant relations to teaching ability were found to be comparable to the personality factors for the A.C.E., an examination in English, or tests on general culture or knowledge of contemporary affairs. The bulk of the predicted criterion

variance came from the personality factors. Lamke (50), in an attempt to establish a relationship between personality and teaching success, used the following criterion as an indication of success: "indicated," "doubtful**," "not indicated." Teaching effectiveness was measured by supervisors, superintendents, and expert opinion, and the following results were reported:

1. Good and poor teachers had within broad limits characteristic response patterns.
2. Good and poor teachers did not fall into two well-defined characteristic patterns.

Good teachers did score slightly higher in gregariousness, adventurous, frivolous, abundant emotional responses, strong artistic or sentimental interests, interest in opposite sex, polished, fastidious, and cool. Poor teachers tended to be shy, cautious, conscientious, and lacked emotional response. The implications were that good teachers were good for different reasons and that poor teachers failed for various reasons.

**BIPOLAR DESCRIPTIONS OF SOURCE TRAITS
(FACTORS) A THROUGH Q4**

High Score	Factor	Low Score
Cyclothymia (Warm, sociable)	A	Schizothymia (Aloof, stiff)
General intelligence	B	Mental defect
Emotional stability	C	Dissatisfied emotionally
Dominance or ascendance (Aggressive, competitive)	E	Submission (“Milk-toast,” mild)
Surgency (Enthusiastic, happy-go-lucky)	F	Desurgency (Glum, sober, serious)
Character or super-ego strength	G	Lack of rigid, internal standards
Parmia (Adventurous, “thick-skinned”)	H	Threctia (Shy, timid)
** Premsia (Sensitive, effeminate) Demanding, impatient, subjective Dependent, seeking help Artistically fastidious, affected Imaginative in inner life and in conversation Acts on sensitive intuition	I	Harria (Tough, realistic) Realistic, expects little Self-reliant, taking responsibility Few artistic responses Unaffected by “fancies” Acts on practical, logical evidence

High Score	Factor	Low Score
** Protension (paranoid tendency) (Suspecting, jealous) Jealous Self-sufficient Suspicious Withdrawn, brooding Tyrannical Hard Irritable	L	Relaxed security (Accepting, adaptable) Accepting Outgoing Trustful Open, ready to take a chance Understanding and permis- sive Soft-hearted Composed and cheerful
** Autia (Bohemian introverted, absent- minded) Unconventional, self- absorbed Interested in art, theory, basic beliefs Imaginative, creative Frivolous, immature in practical judgment Generally cheerful, but oc- casional hysterical swings of "giving up"	M	Praxernia (Practical, concerned with facts) Conventional, alert to practical needs Interests narrowed to im- mediate issues No spontaneous creativity Sound, realistic, practical judgment Earnest, concerned, wor- ried, but very steady
Shrewdness (Sophisticated, polished)	N	Naivete (Simple, unpretentious)
Guilt proneness (Timid, insecure)	O	Confident adequacy (Confident, self-secure)
Radicalism	Q1	Conservatism of temperament

High Score	Factor	Low Score
** Self-sufficiency (Self-sufficient, resourceful)	Q2	Group dependency (Sociably group dependent)
High self-sentiment formation (Controlled, exacting will power)	Q3	Poor self-sentiment formation (Uncontrolled, lax)
** High ergic tension (Tense, excitable)	Q4	Low ergic tension (Phlegmatic, composed)

APPENDIX B

DESCRIPTION OF THE GUILFORD ZIMMERMAN

TEMPERAMENT SURVEY

GUILFORD ZIMMERMAN TEMPERAMENT SURVEY

Designed by Guilford and Zimmerman (34) to cover in one inventory most of the thirteen traits found in three original inventories, the survey provides scores for separate factors or primary traits of personality. The present test records personality scores in the following ten categories:

- G General activity
- R Restraint vs. rathymia
- A Ascendance
- S Sociability
- E Emotional stability
- O Objectivity
- F Friendliness
- T Thoughtfulness
- P Personal relations
- M Masculinity (of emotions and interests)

For purposes of this study the M factor was not used, as this particular score was not available.

Studies done on the comparison of vocational group patterns or scores show unique characteristics for librarians, nurses, engineers, and teachers. Bryan (14) found that librarians, both male

and female, show a tendency to be low in ascendance, confidence, and general drive. When research engineers are compared to sales engineers, Kirkpatrick (46) found the research engineers to be lower in ascendance, sociability, and friendliness. Bendig (7) found that teachers tend to be more restrained, emotionally stable, objective, friendly, and tolerant, but lower in general activity and ascendance. Ryans (77) found that a select group of elementary teachers were more emotionally stable, friendly, cooperative and agreeable, restrained, and objective than the average adult. When three hundred teachers were compared to University of California, Los Angeles, degree candidates, Gowan (32) found the teachers to be more objective, friendly, emotionally stable, restrained, and had better personal relations. They were also less ascendant, less social than the control group. Personal relations showed the most significant difference of the entire battery.

Guilford-Zimmerman Temperament Survey

Nature and purposes of survey

This questionnaire was designed to assess a number of traits of personality. As with most devices of this kind, the validity of the results is closely dependent upon the accuracy and the frankness with which the respondent fills out the questionnaire.

Interpretation of scores

The scores on this questionnaire are reported in "C-Scores" which range from 0 to 10. A C-Score is a form of standard score which divides the original raw score distribution into 11 equal score intervals. The per cent of cases falling within each C-score interval is shown in the table at the right. The scores upon which the norms are based were obtained from a standardization group consisting of 523 college men and 389 college women in one university and two junior colleges in southern California. The scores of men and women are based upon separate norms for the respective sex groups owing to some few definite sex differences found in the responses.

<u>C-Score</u>	<u>Per Cent of Cases</u>	
10	highest	1 per cent
9	next	3 per cent
8	next	7 per cent
7	next	12 per cent
6	next	17 per cent
5	middle	20 per cent
4	next	17 per cent
3	next	12 per cent
2	next	7 per cent
1	next	3 per cent
0	lowest	1 per cent

It may be helpful to consider separately each one of the special trait categories and indicate in a general way just what a high or low score seems to suggest. The student should be cautioned that the consideration of each trait in isolation, without reference to the scores on the other traits, is somewhat artificial. The pattern of scores, on the other hand, is frequently of much more significance than several scores considered without reference to each other.

G--General Activity. A high C-score indicated strong drive and a tendency to engage in vigorous overt action. A low C-score indicates a tendency to inertness and disinclination for physical activity. For good mental health a C-score in the middle range seems to be the most desirable.

R--Restraint. The results suggest that the happy-go-lucky, impulsive individual (low C-score) is not too well suited for positions of responsibility, such as supervision. The other extreme, that of the overrestrained, overserious individual, is also less promising. Presumably, a balance is desirable in this trait, with a slight advantage to restraint.

A--Ascendancy. A high C-score suggests social leadership, and a low C-score, social passiveness. The C-score of a person on this trait must be interpreted in the light of his other characteristics of temperament and no general rule can be set forth as to what C-score on trait A is most desirable for mental health. However, there is emphasis in our culture on the general desirability of a high C-score on this trait. Women tend to have somewhat lower C-scores on A than do men.

S--Sociability. The high and low C-scores indicate, respectively, the contrast between the person who is at ease with others, enjoys their company and readily establishes intimate rapport, as against the withdrawn, reserved person who is hard to get to know.

E--Emotional Stability. A high C-score indicates optimism and emotional stability. A score that is very high, however, if coupled with a low score on trait G may indicate a sluggish or lazy individual. A very low score seems to be a sign of poor mental health in general.

O--Objectivity. A high C-score on this trait indicates a tendency to view one's self and one's surroundings objectively and dispassionately. A low C-score indicates a tendency to take everything personally and subjectively and be hypersensitive. Here again it would appear that extremes may be undesirable--a person could be too objective for effective performance as well as too subjective.

F--Friendliness. A high C-score may have several possible meanings: lack of fighting tendencies; a healthy, realistic handling of frustrations and injuries; an urge to please others; or a desire to be liked. A low score suggests unfriendliness in one form or another.

T--Thoughtfulness. The high C-score indicates a tendency to engage in reflection and planning, while a low C-score indicates a disinclination to be thoughtful.

P--Personal Relations. This trait seems to represent the core of "getting along with others" in social relations. A high C-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.

APPENDIX C

DESCRIPTION OF THE NORMAN PEER GROUP NOMINATION FORM

NORMAN PEER GROUP NOMINATION FORM

As part of this study a peer group nomination form developed by Norman (64) was used in an attempt to identify five traits of personality. This technique uses peer group ratings on twenty bipolar scales which are combined to yield scores on the following five personality factors.

1. Surgency (assertive, frank, energetic, talkative, etc.).
2. Agreeableness (cooperative, attentive, mild-mannered, not jealous, etc.).
3. Dependability (responsible, conscientious, orderly, etc.).
4. Emotional stability (calm, poised, in control of emotions, etc.).
5. Culture (artistic, polished, imaginative, effective intelligent, etc.).

At the time of this study Norman was developing a technique of assessing these five culturally valued traits. Isaacson, McKeachie, and Milholland (41) found that peer nomination measures of these characteristics accounted for a substantial portion of the variance in student ratings of teaching fellows.

This work stems from the investigations of Cattell (16), Tupes (83), and Tupes and Christal (84). The factors defined by the peer nomination procedures are those assumed to be relevant to teaching, and therefore useful in identifying elementary school student teachers.

APPENDIX D

ASSESSMENT FORM A--SUPERVISING TEACHER

STUDENT TEACHING EVALUATION FORM

UNIVERSITY OF MICHIGAN

SCHOOL OF EDUCATION

Student _____

School and grade _____

Supervising teacher _____

Key to marking: Check each item below on the numerical scale.
1 is the low end and 10 is the high end. To help
you, the following suggestions are offered.

1-2 Very weak and unless corrected will cause many problems during a teaching assignment.

3-4 Below average; will need much help and supervision during the first year of teaching.

5-6 Average; should do a steadily improving job in beginning teaching.

7-8 Strong performance; is well prepared to teach.

9-10 Excellent; is professionally prepared in every respect.

[illegible]

TEACHING OF READING (Continued)	1	2	3	4	5	6	7	8	9	10	Lack of Evidence
5. Motivation of students											
6. Evaluation techniques											
TEACHING OF ARITHMETIC	1	2	3	4	5	6	7	8	9	10	Lack of Evidence
1. Knowledge of the subject											
2. Planning for instruction											
3. Techniques of presentation											
4. Adaptation of instruction to individual needs											
5. Motivation of students											
6. Evaluation techniques											
TEACHING OF SOCIAL STUDIES	1	2	3	4	5	6	7	8	9	10	Lack of Evidence
1. Knowledge of the subject											
2. Planning for instruction											
3. Techniques of presentation											
4. Adaptation of instruction to individual needs											
5. Motivation of students											
6. Evaluation techniques											

IF THE STUDENT HAS BEEN RESPONSIBLE FOR OTHER AREAS OF INSTRUCTION, PLEASE USE THE SPACES PROVIDED BELOW TO DESCRIBE THEM.

SUBJECT TAUGHT	1	2	3	4	5	6	7	8	9	10	Lack of Evidence
1. Knowledge of the subject											
2. Planning for instruction											
3. Techniques of presentation											
4. Adaptation of instruction to individual needs											
5. Motivation of students											
6. Evaluation techniques											
SUBJECT TAUGHT	1	2	3	4	5	6	7	8	9	10	Lack of Evidence
1. Knowledge of the subject											
2. Planning for instruction											
3. Techniques of presentation											
4. Adaptation of instruction to individual needs											
5. Motivation of students											
6. Evaluation techniques											

Comments:

RAPPORT WITH CHILDREN	1	2	3	4	5	6	7	8	9	10
1. Shows respect for basic worth and dignity of each pupil										
2. Shows affection for pupils and receives this in return										
3. Demonstrates earned confidence of pupils										
4. Relates with pupils in a warm and friendly manner										
RAPPORT WITH ADULTS	1	2	3	4	5	6	7	8	9	10
1. Is comfortable in relations with adults										
2. Seeks and utilizes helpful suggestions from staff										
3. Seen as professional and mature person by adults										
4. Communicates effectively with parents and staff										
PERSONAL QUALITIES	1	2	3	4	5	6	7	8	9	10
1. Physically capable of handling a class of children										
2. Emotionally stable										
3. Enthusiastic										
4. Conscientious										
5. Creative										
6. Adaptable										

Comments:

APPENDIX E

ASSESSMENT FORM B--SUPERVISING PRINCIPAL

[illegible]

[illegible]

PERSONAL QUALITIES (Continued)	1	2	3	4	5	6	7	8	9	10
4. Conscientious										
5. Creative										
6. Adaptable										

Comments:

APPENDIX F

**ASSESSMENT FORM C--STUDENT TEACHER
SELF-EVALUATION**

Supervising teacher _____

9-10 Excellent; I feel I am professionally prepared in every respect.

[illegible]

TEACHING OF READING (Continued)	1	2	3	4	5	6	7	8	9	10	Lack of Evidence
5. Motivation of students											
6. Evaluation techniques											
TEACHING OF ARITHMETIC	1	2	3	4	5	6	7	8	9	10	Lack of Evidence
1. Knowledge of the subject											
2. Planning for instruction											
3. Techniques of presentation											
4. Adaptation of instruction to individual needs											
5. Motivation of students											
6. Evaluation techniques											
TEACHING OF SOCIAL STUDIES	1	2	3	4	5	6	7	8	9	10	Lack of Evidence
1. Knowledge of the subject											
2. Planning for instruction											
3. Techniques of presentation											
4. Adaptation of instruction to individual needs											
5. Motivation of students											
6. Evaluation techniques											

**IF YOU HAVE BEEN RESPONSIBLE FOR OTHER AREAS OF IN-
STRUCTION, PLEASE USE THE SPACES PROVIDED BELOW TO
DESCRIBE THEM.**

SUBJECT TAUGHT	1	2	3	4	5	6	7	8	9	10	Lack of Evidence
1. Knowledge of the subject											
2. Planning for instruction											
3. Techniques of presentation											
4. Adaptation of instruction to individual needs											
5. Motivation of students											
6. Evaluation techniques											
SUBJECT TAUGHT	1	2	3	4	5	6	7	8	9	10	Lack of Evidence
1. Knowledge of the subject											
2. Planning for instruction											
3. Techniques of presentation											
4. Adaptation of instruction to individual needs											
5. Motivation of pupils											
6. Evaluation techniques											

Comments:

APPENDIX G

ASSESSMENT FORM D--COLLEGE SUPERVISOR

[illegible]

APPENDIX H

**LETTER TO SUPERVISING TEACHERS IN GRADES
4, 5, AND 6 FROM THE COORDINATOR OF
DIRECTED TEACHING IN ELE-
MENTARY EDUCATION**

UNIVERSITY OF MICHIGAN
School of Education

January 23, 1961

To: Supervising Teachers, Grades 4, 5, 6

From: Lowell W. Beach
Coordinator, Directed Teaching in Elementary Education

We are asking your help in making it possible for us to gather more information about our student teaching program.

Within a few days after your student teacher has completed her assignment, will you please have the pupils in your class fill out the enclosed Student Evaluation Form. Please ask your children to be as honest as possible in their evaluation.

DIRECTIONS FOR ADMINISTERING

1. No names to appear on the evaluation form.
2. Responses to be recorded with either an X or a ✓ mark.

Please return the forms in this envelope to the principal by February 1, 1961.

Thank you for your cooperation.

APPENDIX I

ASSESSMENT FORM E--PUPIL EVALUATION

STUDENT EVALUATION

Evaluation	Very, Very Much	A Lot	O.K.	A Little	Not Much
1. Most of the class liked her					
2. I liked her					
3. She helped me learn					
4. I would like her as my full-time teacher next year					

APPENDIX J

EXPERIENCES WITH CHILDREN PRIOR TO

STUDENT TEACHING

EXPERIENCES WITH CHILDREN PRIOR TO STUDENT TEACHING

Name _____ Date _____

On the form below, you are asked to supply three kinds of information for each item. In the column at the left, you are asked to indicate the approximate number of hours you participated in the activity with children (1) while in high school, and (2) after leaving high school. In the column on the right you are asked to indicate, first, how you participated: i.e., as an observer, you simply watched; as an active participant, you were, so to speak, one of the group; or as a leader, you originated ideas and organized for others. Finally, you are asked to indicate the nature of the supervision: were you responsible to another person, such as a teacher, leader, or superintendent, or were you on your own in planning and executing? The blank lines are for any experiences with children you may have had that are not listed. Please add these and evaluate them as you did the others on the list.

Total Hrs.		Total Hours					
high school	after high school	Experiences with Children	observer	active participant	leader	supervised	not supervised
		<u>Scouting and Camp Counseling</u>					
		shop crafts					
		art					
		music					
		dancing, folk, square					
		field trips and excursions					
		reading and telling stories					
		athletic activities, swimming, etc.					
		overnight camping					

Total Hrs.		Total Hours				
high school	after high school	Experiences with Children	observer	active participant	leader	supervised not supervised
		<u>Church, "Y," 4H, etc.</u>				
		athletics, swimming, basket-				
		ball, etc.				
		projects, cooking, sewing,				
		etc.				
		crafts				
		music				
		arts				
		dancing				
		camping				
		<u>Community Activities</u>				
		care of neighboring children				
		supervision of playgrounds				
		work with delinquent children				
		library work with children				
		assisting at clinics				
		tutoring				
		<u>Activities in Connection</u>				
		<u>with College Courses in</u>				
		<u>Education; i.e., C20 C1</u>				
		assisting in play periods				
		reading and telling stories				
		supervising lunch periods				
		arts and crafts				
		songs and music				
		tutoring in special areas				
		going on field trips				
		helping with plays and pro-				
		grams				

APPENDIX K

**CORRELATIONS BETWEEN ALL FACTORS OF THE
CATTELL 16 PERSONALITY FACTOR QUESTION-
NAIRE AND THE FIVE ASSESSMENT FORMS**

**CORRELATIONS BETWEEN ALL FACTORS OF THE
CATTELL 16 PERSONALITY FACTOR QUESTION-
NAIRE AND THE FIVE ASSESSMENT FORMS^a**

Factor	Pupil Evaluation ^b			Super- vising Teacher Evalu- ation	Self- evalu- ation	Super- vising Prin- cipal Eval.	College Super- visor Evalu- ation
	1	2	3				
A	.183	.188	.218	.033	-.014	-.156	.059
B	-.129	-.204	-.117	-.316	-.005	-.051	-.181
C	-.001	.031	.037	-.141	-.031	-.111	-.052
E	-.256	-.172	-.140	-.042	.199	.035	.108
F	.030	-.016	.050	-.125	-.011	-.130	.149
G	.187	.257	.157	.145	-.078	.033	.018
H	-.064	-.016	.040	.016	.203	.073	.202
I	-.280	-.152	-.135	.079	.210	.129	.164
L	-.012	-.023	-.008	.279	-.163	-.025	.043
M	-.284	-.207	-.255	.047	-.063	.227	.180
N	.142	.138	.139	.038	-.057	-.024	.201
O	.039	.016	.003	.066	-.146	.068	-.080
Q1	-.187	-.120	-.074	.003	-.145	.175	.145
Q2	-.087	.014	-.047	-.302	-.032	-.123	-.336
Q3	.004	.010	.065	.003	-.022	-.064	-.051
Q4	.060	.054	.001	.095	-.091	.129	.111

^aLevels of significance: N = 57; .05 = .261; .01 = .338.

^bPupil evaluations: (1) I like her. (2) She helped me learn.
(3) I would like her as my teacher next year.

APPENDIX L

CORRELATIONS BETWEEN ALL FACTORS OF THE

GUILFORD ZIMMERMAN TEMPERAMENT SURVEY

AND THE FIVE ASSESSMENT FORMS

**CORRELATIONS BETWEEN ALL FACTORS OF THE
GUILFORD ZIMMERMAN TEMPERAMENT SURVEY
AND THE FIVE ASSESSMENT FORMS^a**

Factor	Pupil Evaluation ^b			Super- vising Teacher Evalu- ation	Self- evalu- ation	Super- vising Prin- cipal Eval.	College Super- visor Evalu- ation
	1	2	3				
G	-.118	-.143	-.171	.107	.150	.141	.104
R	.011	.033	-.003	.032	-.122	.071	-.022
A	-.124	-.136	-.042	-.063	.203	-.061	.150
S	.042	.055	.098	.019	.142	-.127	.157
E	.082	.118	.123	.084	.268	-.086	-.109
O	.111	.096	.104	.113	.307	.165	-.013
F	-.043	.059	-.007	.012	.061	.180	.001
T	-.239	-.172	-.154	-.058	-.194	-.138	.035
P	-.005	.032	-.032	.020	.205	.213	.029

^aLevels of significance: N = 57; .05 = .261; .01 = .338.

^bPupil evaluations: (1) I like her. (2) She helped me learn.
(3) I would like her as my teacher next year.

APPENDIX M

CORRELATION BETWEEN NORMAN PEER GROUP

NOMINATION FORM AND THE FIVE

ASSESSMENT FORMS

**CORRELATION BETWEEN NORMAN PEER GROUP
NOMINATION FORM AND THE FIVE
ASSESSMENT FORMS^a**

Factor	Pupil Evaluation ^b			Super- vising Teacher Evalu- ation	Self- evalu- ation	Super- vising Prin- cipal Eval.	College Super- visor Evalu- ation
	1	2	3				
1	-.078	-.082	-.049	-.001	.149	.003	.373
2	.112	.096	.110	.080	-.019	.168	.040
3	.241	.172	.186	.078	-.125	.194	-.128
4	-.093	-.106	-.089	-.017	.036	.153	.312
5	.060	.011	.034	.059	.111	.161	.232

^aLevels of significance: $N = 57$; $.05 = .261$; $.01 = .338$.

^bPupil evaluations: (1) I like her. (2) She helped me learn.
(3) I would like her as my teacher next year.

APPENDIX N

CORRELATIONS BETWEEN THE AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION SCORES AND THE FIVE ASSESSMENT FORMS

**CORRELATIONS BETWEEN THE AMERICAN COUNCIL
ON EDUCATION PSYCHOLOGICAL EXAMINATION
SCORES AND THE FIVE ASSESSMENT FORMS^a**

Scores ^b	Pupil Evaluation ^c			Super- vising Teacher Evalu- ation	Self- evalu- ation	Super- vising Prin- cipal Eval.	College Super- visor Evalu- ation
	1	2	3				
Q	-.081	.013	-.021	-.001	-.077	.120	-.093
L	-.176	-.134	-.148	-.204	.157	.112	-.190
T	-.166	-.083	-.115	-.144	.074	.149	-.177

^aLevels of significance: $N = 57$; $.05 = .261$; $.01 = .338$.

^bQ = quantitative; L = linguistic; T = total.

^cPupil evaluations: (1) I like her. (2) She helped me learn.
(3) I would like her as my teacher next year.

APPENDIX O

**CORRELATIONS BETWEEN UNIVERSITY OF
MICHIGAN GRADE POINTS AND THE
FIVE ASSESSMENT FORMS**

**CORRELATIONS BETWEEN UNIVERSITY OF
MICHIGAN GRADE POINTS AND THE
FIVE ASSESSMENT FORMS^a**

Factor	Pupil Evaluation ^b			Super- vising Teacher Evalu- ation	Self- evalu- ation	Super- vising Prin- cipal Eval.	College Super- visor Evalu- ation
	1	2	3				
Grade Point	.137	.198	.133	.183	-.103	.249	.099

^aLevels of significance: $N = 57$; $.05 = .261$; $.01 = .338$.

^bPupil evaluations: (1) I like her. (2) She helped me learn.
(3) I would like her as my teacher next year.

APPENDIX P

CORRELATIONS BETWEEN EXPERIENCES WITH

CHILDREN PRIOR TO STUDENT TEACHING

AND THE FIVE ASSESSMENT FORMS

**CORRELATIONS BETWEEN EXPERIENCES WITH CHILDREN
PRIOR TO STUDENT TEACHING AND FIVE
ASSESSMENT FORMS^a**

Experi- ences ^b	Pupil Evaluation ^c			Super- vising Teacher Evalu- ation	Self- evalu- ation	Super- vising Prin- cipal Eval.	College Super- visor Evalu- ation
	1	2	3				
Scouting							
H.S.	.020	-.041	.022	-.014	-.165	-.012	-.107
Coll.	.037	.023	-.030	-.070	-.197	.018	-.136
Church							
H.S.	-.175	-.115	-.065	-.019	-.054	-.028	.087
Coll.	-.275	-.221	-.225	-.236	-.143	-.087	-.065
Commu- nity							
H.S.	.140	.285	.194	.078	-.035	.168	-.026
Coll.	.080	.099	.140	.065	-.247	.117	.178
F.T.A.	-.113	-.132	-.107	-.011	-.112	.093	.124
College courses							
	-.095	-.210	-.091	-.134	.171	-.223	-.015
Other	-.259	-.336	-.208	-.133	.029	-.018	.004

^aLevels of significance: $N = 57$; $.05 = .261$; $.01 = .338$.

^bH.S. = high school; Coll. = college.

^cPupil evaluations: (1) I like her. (2) She helped me learn.
(3) I would like her as my teacher next year.

BIBLIOGRAPHY

1. Almy, H. C., and Sorenson, H. "A Teacher Rating Scale of Determined Reliability and Validity," Educational Administration and Supervision, XVI (1930), 179-86.
2. American Association of Teachers Colleges. School and Community Laboratory Experiences in Teacher Education. Report of the Subcommittee on Standards and Surveys, December, 1948.
3. Anderson, H. M. "A Study of Certain Criteria of Teaching Effectiveness," Journal of Experimental Education, 1954, pp. 41-71.
4. Barr, A. S. "The Measurement and Prediction of Teaching Efficiency: A Summary of Investigations," Journal of Experimental Education, XVI (1948), 203-83.
5. ————. "The Measurement of Teacher Characteristics and Prediction of Teaching Efficiency," Review of Educational Research, XXII, No. 3 (1952), 169-74.
6. ————. "Problems Associated with Measurement and Prediction of Teacher Success," Journal of Educational Research, LI (1958), 695-700.
7. Bendig, A. W. "Ability and Personality Characteristics of Introductory Psychology Instructors Rated Competent and Empathetic by Their Students," Journal of Educational Research, XLVIII (1955), 705-9.
8. Bent, R. K. "Relationship between Qualifying Examinations, Various Other Factors and Student Teaching Performance at the University of Minnesota," Journal of Experimental Education, V (1937), 251-55.

9. Bliss, W. B. "How Much Mental Ability Does a Teacher Need?" Journal of Educational Research, VI (1922), 33-41.
10. Bossing, Nelson L. Teacher Aptitude Tests and Teacher Selection. U.S. Office of Education Bulletin No. 12. Washington: Government Printing Office, 1932, pp. 117-33.
11. Bowman, E. C. "Pupil Ratings of Student Teachers," Educational Administration and Supervision, XX (1934), 141-46.
12. Brandt, W. J. "Follow-up of Some Earlier Wisconsin Studies of Teaching Ability," Journal of Experimental Education, XVIII (1949), 1-29.
13. Broom, M. E. "The Predictive Value of Three Specified Factors for Success in Practice Teaching," Educational Administration and Supervision, XV (1929), 25-29.
14. Bryan, A. I. The Public Librarian. New York: Columbia University Press, 1952.
15. Burkard, M. I. "Discernment of Teacher Characteristics by T.A.T. Sequence Analysis," Journal of Educational Psychology, LIII, No. 6 (1962), 279-87.
16. Cattell, R. B. "Confirmation and Clarification of Primary Personality Factors," Psychometrika, XII (1947), 197-220.
17. ———. Personality: A Systematic Theoretical and Factual Study. New York: McGraw-Hill, 1950.
18. Cattell, R. B., Saunders, D. R., and Stice, G. Handbook for the Sixteen Personality Factor Questionnaire. Champaign, Ill.: Institute for Personality and Ability Testing, 1957.
19. Cook, D. L. "The Personal Data Form as a Predictor of Success in a Teacher Education Program and Entry into Teaching," Journal for Teachers of Education, XV, No. 1 (1964), 61-66.

20. Cook, D. L., Linden, J. D., and McKay, H. E. "A Factor Analysis of Teacher Trainee Responses to Selected Personality Inventories," Educational Psychology Measurement, XXI (1961), 865-72.
21. Cook, W. W., and Leeds, C. H. "Measuring the Teaching Personality," Educational Psychology Measurement, VII (1947), 399-410.
22. Cook, W. W., Leeds, C. H., and Callis, R. Predicting Teacher Pupil Relations. Twenty-eighth Yearbook, Association for Student Teaching. Ann Arbor, Mich.: The Association, 1949, pp. 66-80.
23. Darrow, H. D. "Relationship of Certain Factors to Performance of Elementary Student Teachers with Contrasting Success Records in Student Teaching," Teachers College Journal, XXXIII, No. 4 (1962), 95-98.
24. Dixon, W. R., and Morse, W. C. "The Prediction of Teaching Performance: Empathic Potential," Journal for Teachers of Education, XII (1961), 322-29.
25. Durflinger, C. W. "A Study of Recent Findings in the Prediction of Teaching Success," Educational Administration and Supervision, XXXIV (1948), 321-36.
26. Edwards, A. L. Statistical Methods for the Behavioral Sciences. New York: Rinehart, 1954.
27. Foss, Maurice F. "Placement Bureau Data and Teaching Success," Journal of Educational Research, LIII, No. 7 (1960).
28. Fuller, E. M. "The Use of Teacher-Pupil Attitudes, Self Rating and Measures of General Ability in the Preservice Selection of Nursery School-Kindergarten-Primary Teachers," Journal of Educational Research, XLIV (1951), 676-86.
29. Good, W. R. An Introduction to Statistics. 5th ed. Ann Arbor, Mich.: Ulrich's Bookstore, 1958.

30. Gowan, J. C. "Relation of the "K" Scale on the M.M.P.I. to Teaching Personality," California Journal of Educational Research, VI (1955), 208-12.
31. ———. "Summary of the Intensive Study of Twenty Highly Selected Elementary Women Teachers," Journal of Experimental Education, XXVI (1957), 115-24.
32. ———. "Teaching Prognosis Scale for the Guilford Zimmerman Temperament Survey," Journal of Educational Research, LIII (1960), 345-48.
33. Greider, C., and Newburn, H. K. "Temperament in Prospective Teachers," Journal of Educational Research, XXXV (1942), 683-93.
34. Guilford, J. P., and Zimmerman, W. S. The Guilford-Zimmerman Temperament Survey: Manual of Instructions and Interpretations. Beverly Hills, Calif.: Sheridan Supply Co., 1949.
35. Hadley, S. T. "A Study of the Predictive Value of Several Variables to Student Teaching Success as Measured by Student Teaching Marks," Teachers College Bulletin, LX, No. 3 (1954), 1-10.
36. Hall, H. O. "Professional Preparation and Teacher Effectiveness," Journal for Teachers of Education, XV, No. 1 (1964), 72-76.
37. Heller, Irene K. "Manifestations of Affiliation Need and Hostile Press in Selected Student Teachers." Unpublished doctoral dissertation, University of Michigan, 1963.
38. Hertzberg, O. E. "The Possible Halo Effect in Practice Teaching Grades," Journal of Educational Research, XIX (1943), 634-36.
39. Hill, R. E. "Dichotomus Prediction of Student Teaching Excellence Employing Selected C.P.I. Scales," Journal of Educational Research, LX (1953), 349-51.

40. Holt, Esther. "Study of Achievement in Educational Psychology," Journal of Experimental Education, XIII (1945), 174-90.
41. Isaacson, R. L., McKeachie, W. J., and Milholland, J. E. "Correlations of Teacher Personality Variables and Student Ratings," Journal of Educational Psychology, LIV, No. 2 (1963), 110-17.
42. Isaacson, R. L., McKeachie, W. J., Milholland, J. E., Lin, Y. G., Baerwaldt, J. W., and Zinn, K. L. "Dimensions of Student Evaluations of Teaching," Journal of Educational Psychology, LV, No. 6 (1964), 344-51.
43. Jones, Ronald D. "The Prediction of Teaching Efficiency from Objective Measures," Journal of Experimental Education, XV (1946), 85-99.
44. Kelley, E. P. "An Investigation into the Value of Selected Tests and Techniques for Guidance of Prospective Teachers Enrolled in Community Experiences Course." Unpublished doctoral dissertation, University of Houston, 1955.
45. Kendall, M. G., and Stuart, A. The Advanced Theory of Statistics. New York: Hafner Publishing Co., 1961, p. 279.
46. Kirkpatrick, J. J. "Validation of a Test Battery for the Selection and Placement of Engineers," Personnel Psychology, IX (1956), 211-27.
47. Knight, F. B. Qualities Related to Success in Teaching. ("Contributions to Education," No. 120.) New York: Teachers College, Columbia University, 1922.
48. Kriner, H. L. "Five Year Study of Teachers College Admissions," Educational Administration and Supervision, XXIII (1937), 192-99.
49. La Duke, C. V. "The Measurement of Teaching Ability," Journal of Experimental Education, XIV (1945), 75-100.

50. Lamke, T. A. "Personality and Teaching Success," Journal of Experimental Education, XX, No. 2 (1951), 217-59.
51. Lawton, J. A. "A Study of Factors Useful in Choosing Candidates for the Teaching Profession," British Journal of Educational Psychology, IX (1939), 131-44.
52. Laycock, S. R. "The Bernreuter Personality Inventory in the Selection of Teachers," Educational Administration and Supervision, XX (1934), 59-63.
53. Lins, Lee Joseph. "The Prediction of Teaching Efficiency," Journal of Experimental Education, XV (1946), 2-60.
54. Loy, H. M. "Changes of Students during Student Teaching in Attitudes toward Teaching and Pupils in the Constructive Use of Principles of Behavior." Unpublished doctoral dissertation, University of Maryland, 1955.
55. McCall, W. A. Measurement of Teacher Merit. Bulletin No. 284, North Carolina Department of Public Instruction, 1952.
56. Mead, A. R., and Holley, C. E. "Forecasting Success in Practice Teaching," Journal of Educational Psychology, VII (1916), 495-97.
57. Medley, D. M., and Mitzel, H. "A Technique for Measuring Classroom Behavior," Journal of Educational Psychology, XLIX, No. 2 (1958), 86-92.
58. Merriam, L. L. Normal School Education and Efficiency in Teaching. ("Contributions to Education," No. 1). New York: Teachers College, Columbia University, 1906.
59. Michaelis, J. U. "The Prediction of Success in Student Teaching from Personality and Attitude Inventories," University of California, Berkeley, Publications in Education, XI, No. 6 (1954), 415-84.
60. Michaelis, J. U., and Tyler, F. T. "Diagnostic and Predictive Value of the Heston Inventory Used in Student Teaching," Journal of Teacher Education, I (1950), 40-43.

61. Miller, Lebern N. "Evaluating Teaching Personality before Student Teaching Begins," Journal of Educational Research, LVI, No. 7 (1963), 382-84.
62. Morris, Elizabeth Hunt. Personal Traits and Success in Teaching. ("Contributions to Education," No. 342). New York: Teachers College, Columbia University, 1929.
63. Morse, W. G. "Some Problems of Pre-service Teacher Selection," Bulletin of the University of Michigan School of Education, XIX (1948), 97-100.
64. Norman, W. T. "Toward an Adequate Taxonomy of Personality Attributes," Journal of Abnormal Social Psychology, XLVI, No. 6 (1963), 574-83.
65. Ort, V. K. "A Study of Some Techniques Used for Predicting the Success of Teachers," Journal for Teachers of Education, XV, No. 1 (1964), 67-71.
66. Payne, George E. "Scholarship and Success in Teaching," Journal of Educational Psychology, IX (1918), 217-19.
67. Pemberton, W. H. "Test Personalities of Student Teachers Rated at the Extremes of Teaching Ability." Unpublished doctoral dissertation, University of California, Berkeley, 1950.
68. Phillips, W. S. An Analysis of Certain Characteristics of Active and Prospective Teachers. ("Contributions to Education," No. 161.) Nashville: Peabody College for Teachers, 1935.
69. Porter, W. A. "Pupil Evaluation of Practice Teaching," Journal of Educational Research, XXXV (1942), 700-4.
70. Rabinowitz, W., and Rosenbaum, I. "Prediction of Pupil Teacher Rapport," Journal of Educational Psychology, XLIX, No. 2 (1958), 93-98.
71. Retan, G. A. "Emotional Instability and Teaching Success," Journal of Educational Research, XXXVII (1943), 135-41.

72. Robb, G. P. "Relationship between Interest and Student Teaching Achievement." Unpublished doctoral dissertation, Indiana University, 1953.
73. Rostker, L. E. "The Measurement of Teaching Ability," Journal of Experimental Education, XIV (1945), 6-51.
74. Ruggs, H. "Is the Rating of Human Character Possible?" Journal of Educational Psychology, XII (1921), 425-38, 485-501.
75. Ryans, D. G. "The Criteria of Teaching Effectiveness," Journal of Educational Research, XLII (1949), 690-99.
76. ———. "Theory Development and the Study of Teacher Behavior," Journal of Educational Psychology, XLVII (1956), 462-75.
77. ———. Characteristics of Teachers: Their Description, Comparison, and Appraisal. Washington: American Council on Education, 1960.
78. Seagoe, M. V. "Prognostic Tests and Teaching Success," Journal of Educational Research, XXXVIII (1945), 685-90.
79. ———. "Prediction of In-service Success in Teaching," Journal of Educational Research, XXXIX (1946), 658-63.
80. Stough, M. F. "The Interrelationships of Measures of Personality and Success of Student Teachers." Unpublished doctoral dissertation, University of California, Berkeley, 1950.
81. Stout, Ruth A. "Selective Admissions and Retention Practices in Teacher Education," Journal of Teacher Education, VIII (1957), 422-32.
82. Symonds, P. M. "Reflections on Observations of Teachers," Journal of Educational Research, LXIII (1950), 688-96.

83. Tupes, E. C. Relationship between Behavior Trait Ratings by Peers and Later Officer Performance of the U.S.A.F. Officer Candidate School Graduates. U.S.A.F. Personnel Training Research Center Research Report No. 57-125. Washington: Government Printing Office, 1957.
84. Tupes, E. C., and Christal, R. E. Stability of Personality Trait Rating Factors Obtained under Diverse Conditions. U.S.A.F. WADC Technical Note No. 58-61. Washington: Government Printing Office, 1958.
85. ———. Recurrent Personality Factors Based on Trait Ratings. U.S.A.F. ASD Technical Report No. 61-97. Washington: Government Printing Office, 1961.
86. Tyler, F. T. "The Prediction of Student-Teaching Success from Personality Inventories," University of California Publications in Education, Berkeley, XI, No. 4 (1954), 233-314.
87. Ward, L. B., and Kirk, S. A. "Studies in the Selection of Students for a Teachers College," Journal of Educational Research, XXXV (1942), 665-72.
88. Wilk, R. E., Edson, W. H., Davies, D., and Chase, Naomi C. Student Teacher Activities and Pupil Responses. University of Minnesota College of Education Research Memo. Minneapolis: University of Minnesota, 1960.
89. Wingo, G. M., and Schorling, R. Elementary School Student Teaching. New York: McGraw-Hill, 1960.
90. Woodruff, A. D. "Exploring Evaluation of Teacher Education," Educational Administration and Supervision, XXXII (1946), 1-18.